FIG. 1

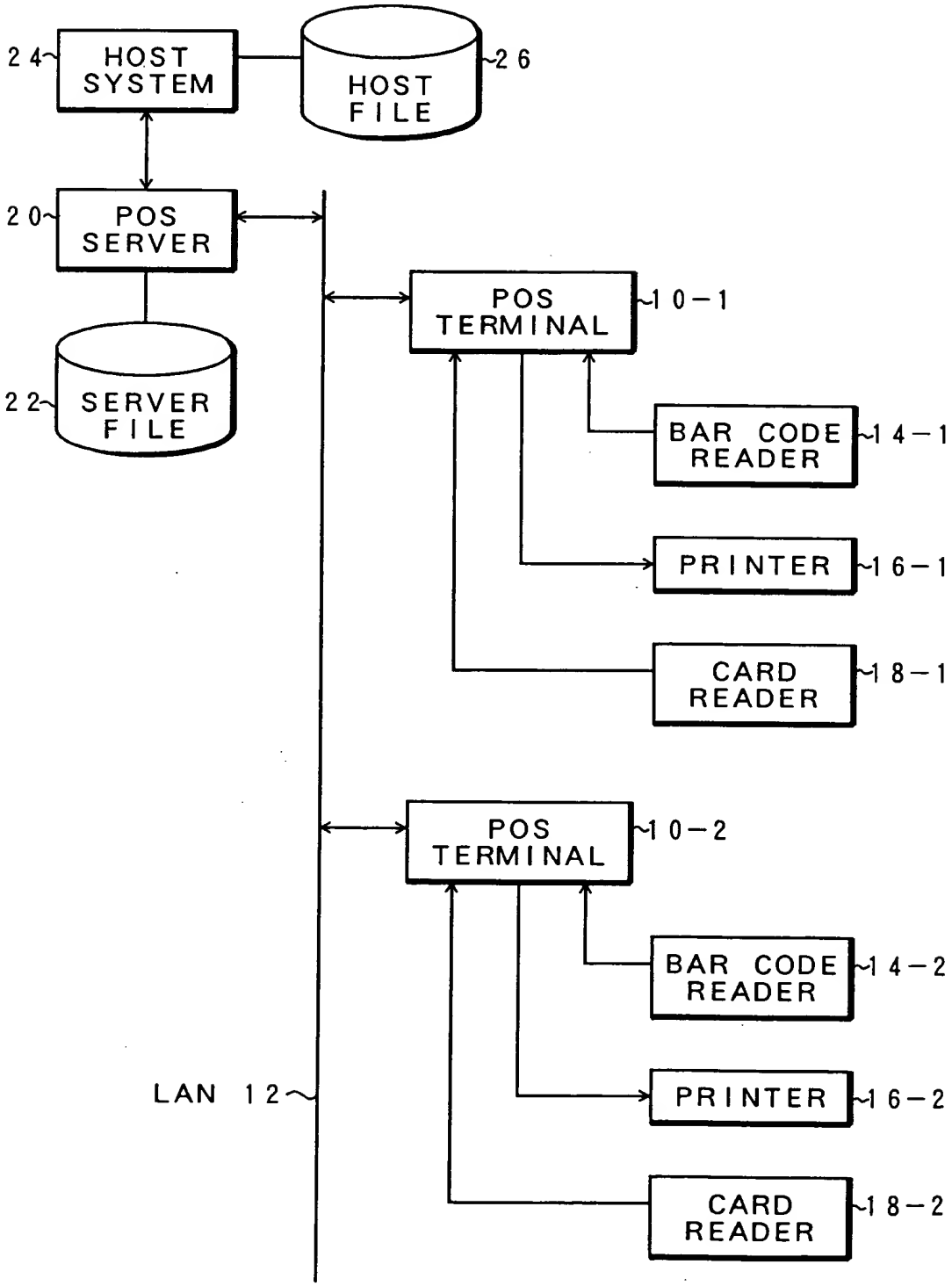

24
HOST SYSTEM
26
HOST FILE
20
POS SERVER
22
SERVER FILE
POS TERMINAL
10-1
BAR CODE READER
14-1
PRINTER
16-1
CARD READER
18-1
POS TERMINAL
10-2
BAR CODE READER
14-2
PRINTER
16-2
CARD READER
18-2
LAN 12

FIG. 2

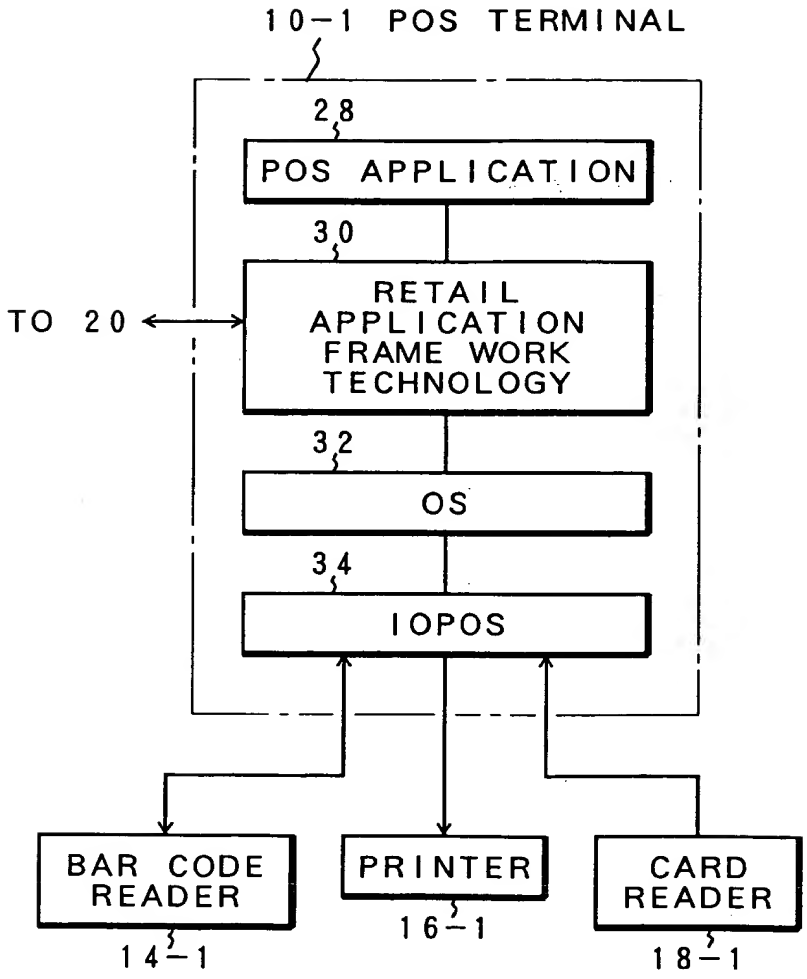

10-1 POS TERMINAL
28
POS APPLICATION
30
RETAIL APPLICATION FRAME WORK TECHNOLOGY
TO 20
32
OS
34
IOPOS
BAR CODE READER
14-1
PRINTER
16-1
CARD READER
18-1

FIG. 3

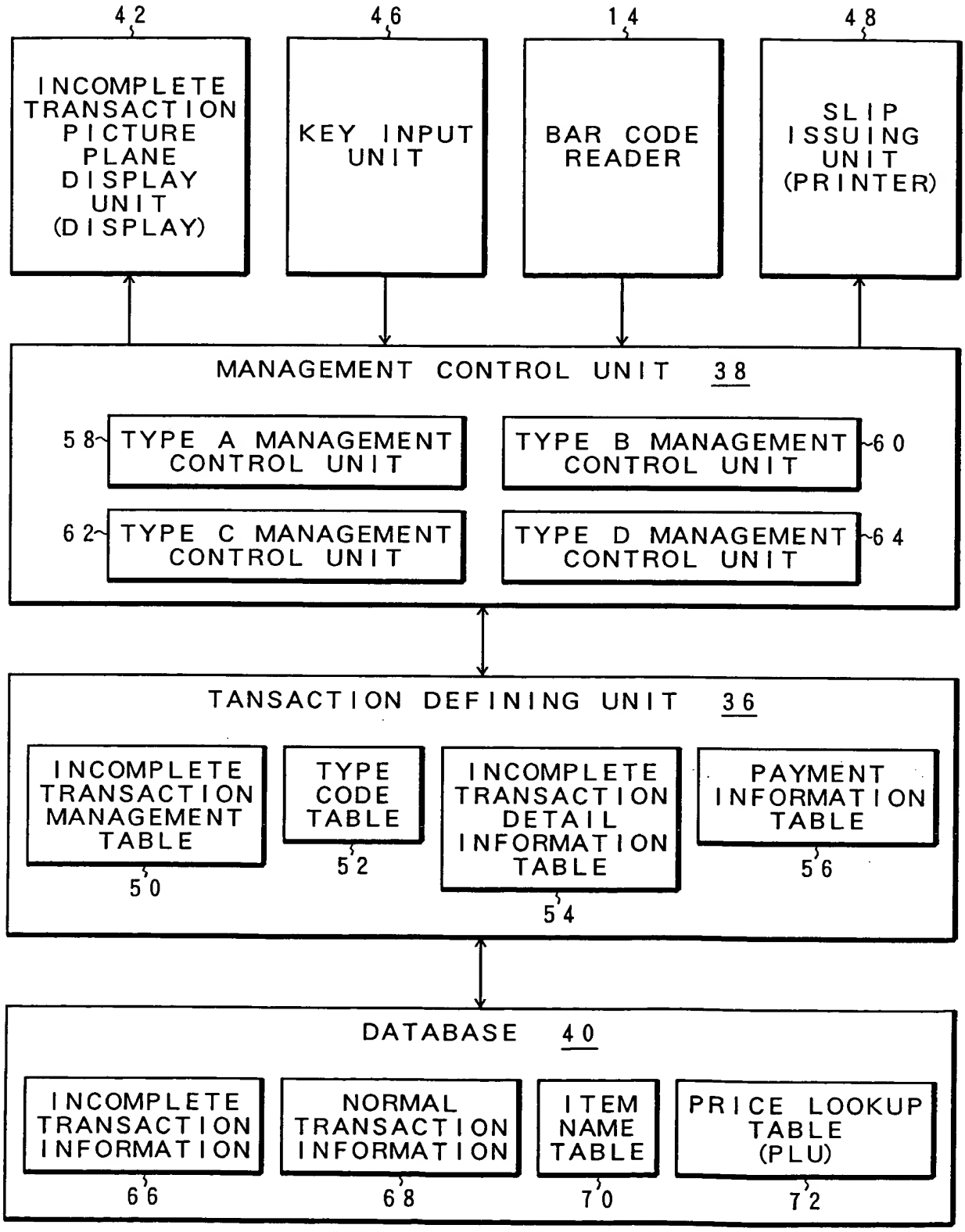

42
INCOMPLETE TRANSACTION PICTURE PLANE DISPLAY UNIT (DISPLAY)
46
KEY INPUT UNIT
14
BAR CODE READER
48
SLIP ISSUING UNIT (PRINTER)
MANAGEMENT CONTROL UNIT 38
58
TYPE A MANAGEMENT CONTROL UNIT
TYPE B MANAGEMENT CONTROL UNIT
60
62
TYPE C MANAGEMENT CONTROL UNIT
TYPE D MANAGEMENT CONTROL UNIT
64
TANSACTION DEFINING UNIT 36
INCOMPLETE TRANSACTION MANAGEMENT TABLE
50
TYPE CODE TABLE
52
INCOMPLETE TRANSACTION DETAIL INFORMATION TABLE
54
PAYMENT INFORMATION TABLE
56
DATABASE 40
INCOMPLETE TRANSACTION INFORMATION
66
NORMAL TRANSACTION INFORMATION
68
ITEM NAME TABLE
70
PRICE LOOKUP TABLE (PLU)
72

FIG. 4A

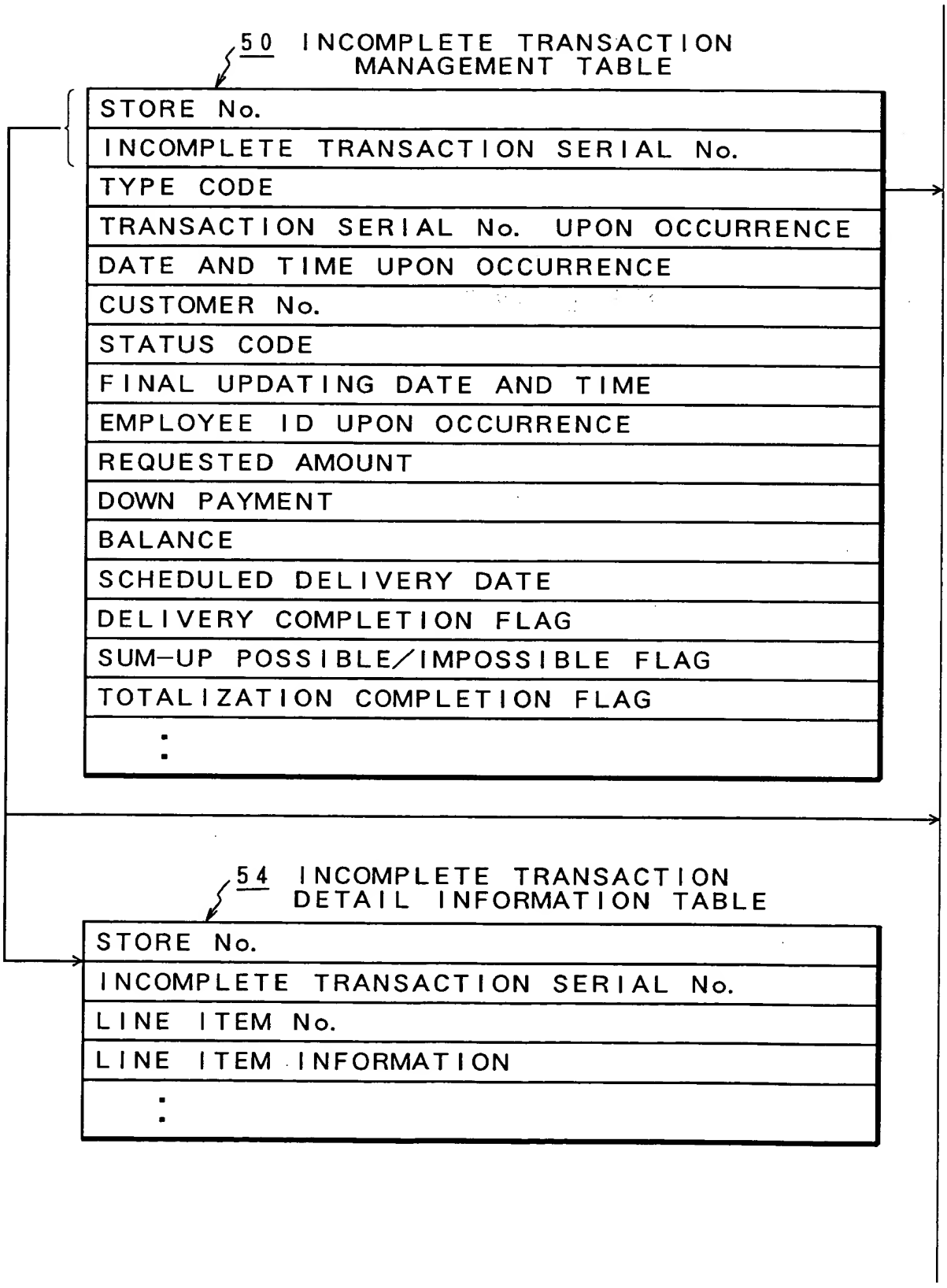

50 INCOMPLETE TRANSACTION MANAGEMENT TABLE
STORE No.
INCOMPLETE TRANSACTION SERIAL No.
TYPE CODE
TRANSACTION SERIAL No. UPON OCCURRENCE
DATE AND TIME UPON OCCURRENCE
CUSTOMER No.
STATUS CODE
FINAL UPDATING DATE AND TIME
EMPLOYEE ID UPON OCCURRENCE
REQUESTED AMOUNT
DOWN PAYMENT
BALANCE
SCHEDULED DELIVERY DATE
DELIVERY COMPLETION FLAG
SUM-UP POSSIBLE/IMPOSSIBLE FLAG
TOTALIZATION COMPLETION FLAG
54 INCOMPLETE TRANSACTION DETAIL INFORMATION TABLE
STORE No.
INCOMPLETE TRANSACTION SERIAL No.
LINE ITEM No.
LINE ITEM INFORMATION

FIG. 4B

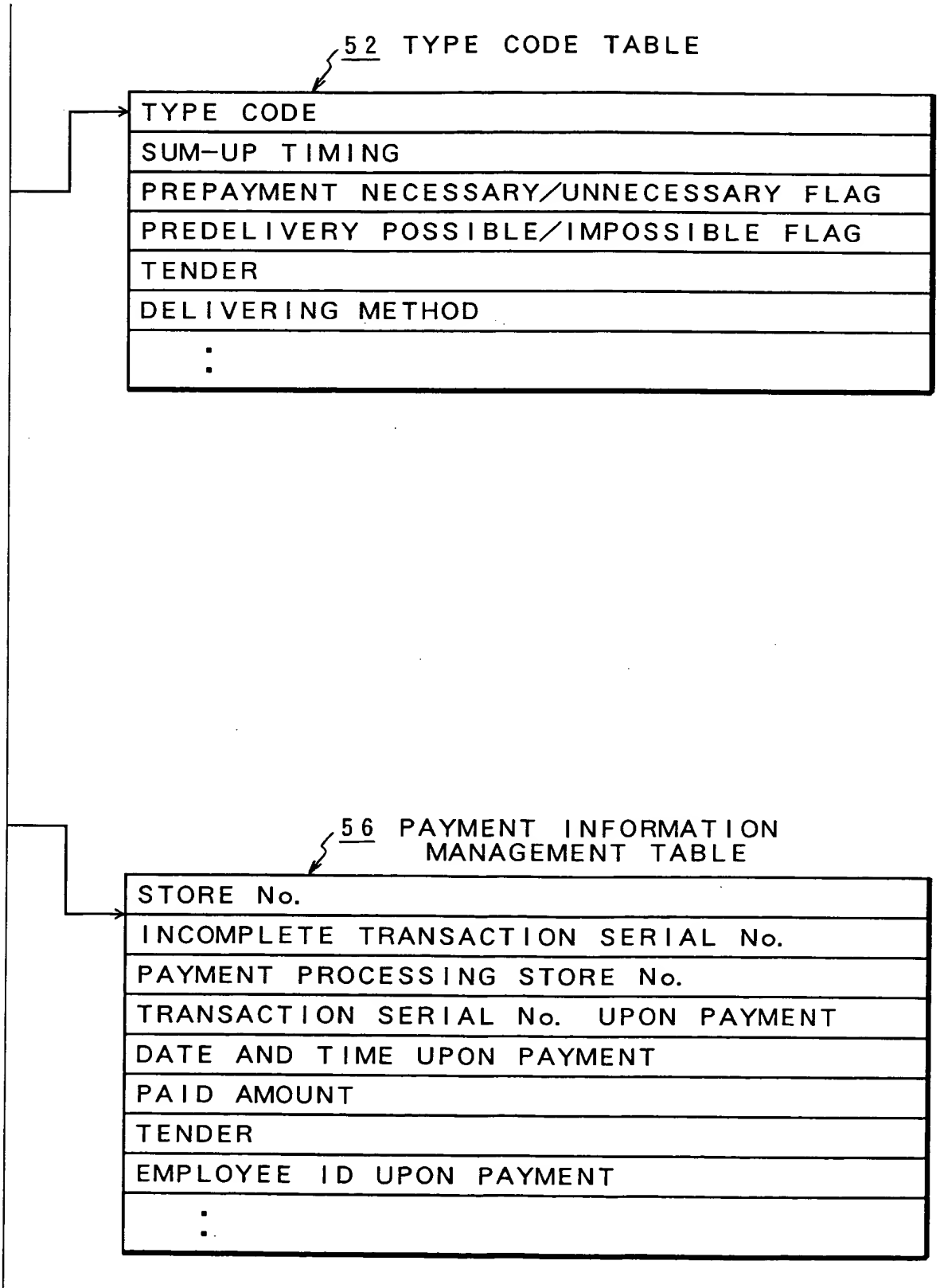

52 TYPE CODE TABLE
TYPE CODE
SUM-UP TIMING
PREPAYMENT NECESSARY/UNNECESSARY FLAG
PREDELIVERY POSSIBLE/IMPOSSIBLE FLAG
TENDER
DELIVERING METHOD
56 PAYMENT INFORMATION MANAGEMENT TABLE
STORE No.
INCOMPLETE TRANSACTION SERIAL No.
PAYMENT PROCESSING STORE No.
TRANSACTION SERIAL No. UPON PAYMENT
DATE AND TIME UPON PAYMENT
PAID AMOUNT
TENDER
EMPLOYEE ID UPON PAYMENT

FIG. 5A

74 TYPE CODE TABLE FOR DEFERRED PICKUP TRANSACTION AND ON THE PRINCIPLE OF OCCURRENCE

TYPE CODE	A
SUM-UP TIMING	UPON OCCURRENCE OF TRANSACTION
PREPAYMENT NECESSARY /UNNECESSARY FLAG	NECESSARY (TOTAL AMOUNT)
DELIVERING METHOD	POSTDELIVERY
SCHEDULED DELIVERY DATE	AFTER 5 BUSINESS DAYS

FIG. 5B

76 TYPE CODE TABLE FOR DEFERRED PICKUP TRANSACTION AND ON THE PRINCIPLE OF COMPLETION

TYPE CODE	B
SUM-UP TIMING	AT THE END OF TRANSACTION
PREPAYMENT NECESSARY /UNNECESSARY FLAG	NECESSARY (TOTAL AMOUNT)
DELIVERING METHOD	POSTDELIVERY
SCHEDULED DELIVERY DATE	AFTER 5 BUSINESS DAYS

FIG. 5C

78 TYPE CODE TABLE FOR DEFERRED PAYMENT TRANSACTION AND ON THE PRINCIPLE OF OCCURRENCE

TYPE CODE	C
SUM-UP TIMING	UPON OCCURRENCE OF TRANSACTION
PREPAYMENT NECESSARY /UNNECESSARY FLAG	UNNECESSARY
DELIVERING METHOD	PREDELIVERY
SCHEDULED DELIVERY DATE	APPOINTED DAY

FIG. 5D

80 TYPE CODE TABLE FOR DEFERRED PAYMENT TRANSACTION AND ON THE PRINCIPLE OF COMPLETION

TYPE CODE	D
SUM-UP TIMING	AT THE END OF TRANSACTION
PREPAYMENT NECESSARY /UNNECESSARY FLAG	UNNECESSARY
DELIVERING METHOD	PREDELIVERY
SCHEDULED DELIVERY DATE	APPOINTED DAY

FIG. 6

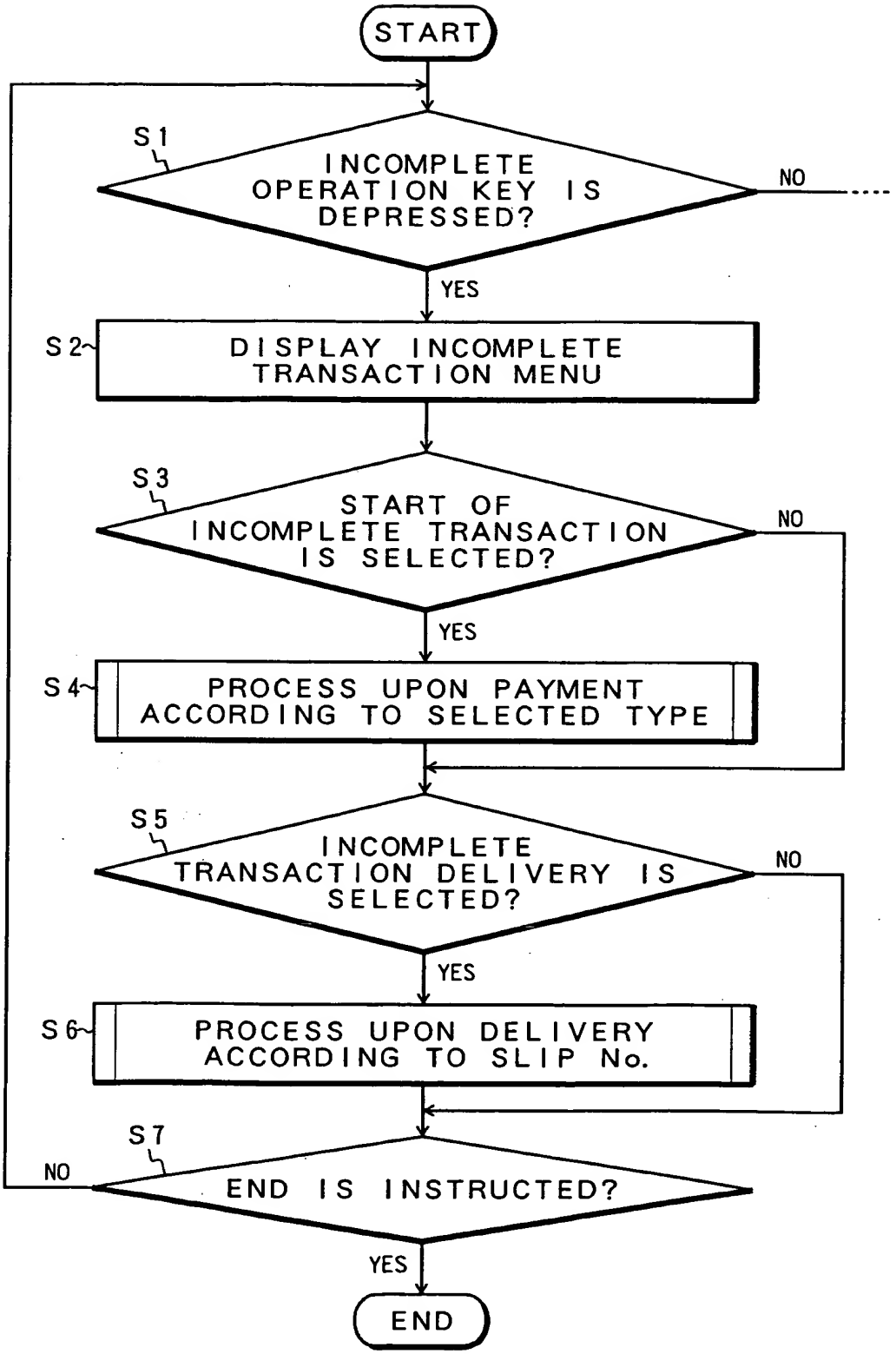

START
S1
INCOMPLETE OPERATION KEY IS DEPRESSED?
NO
YES
S2
DISPLAY INCOMPLETE TRANSACTION MENU
S3
START OF INCOMPLETE TRANSACTION IS SELECTED?
NO
YES
S4
PROCESS UPON PAYMENT ACCORDING TO SELECTED TYPE
S5
INCOMPLETE TRANSACTION DELIVERY IS SELECTED?
NO
YES
S6
PROCESS UPON DELIVERY ACCORDING TO SLIP No.
S7
NO
END IS INSTRUCTED?
YES
END

FIG. 7

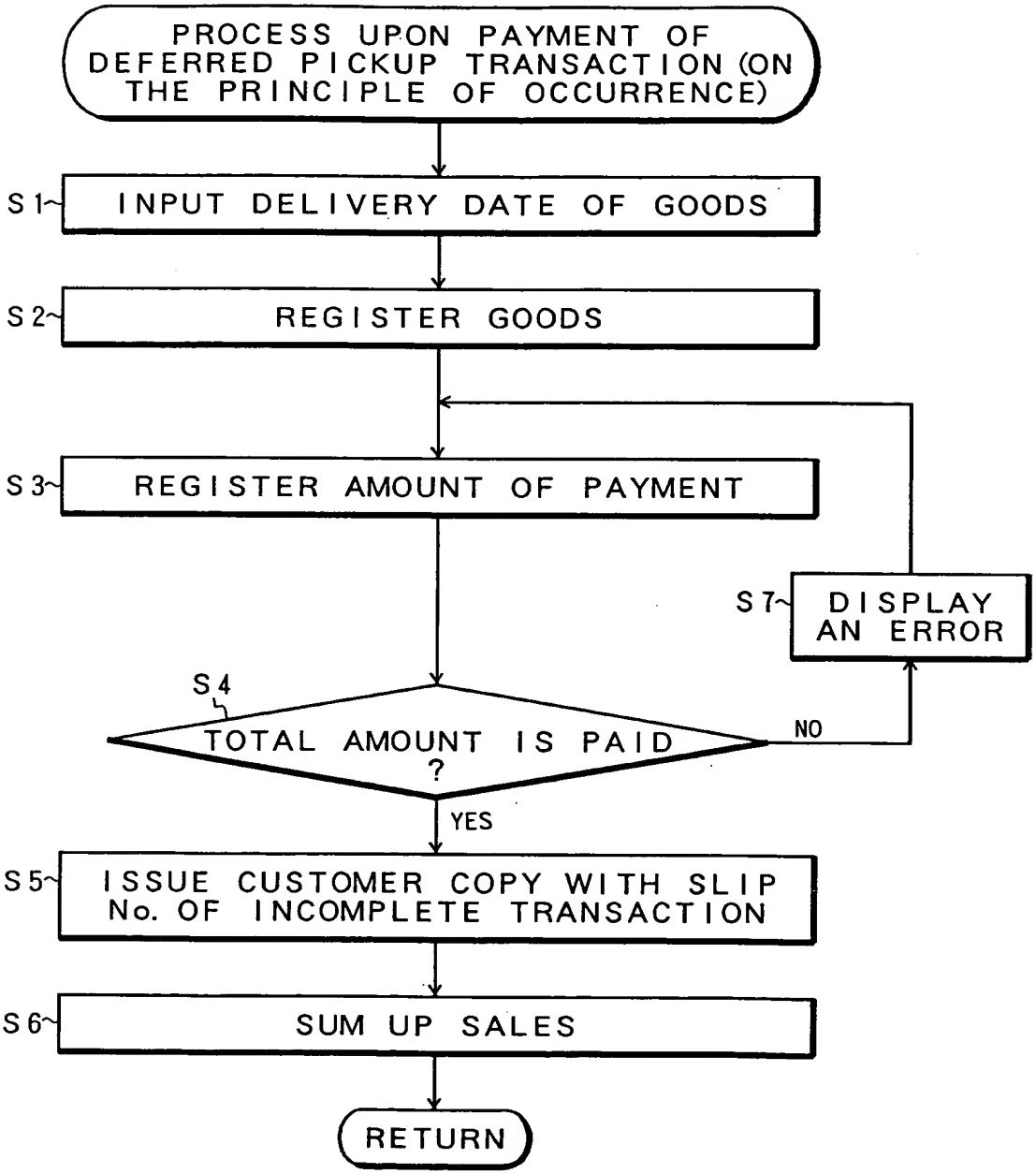

PROCESS UPON PAYMENT OF DEFERRED PICKUP TRANSACTION (ON THE PRINCIPLE OF OCCURRENCE)
S1
INPUT DELIVERY DATE OF GOODS
S2
REGISTER GOODS
S3
REGISTER AMOUNT OF PAYMENT
S7
DISPLAY AN ERROR
S4
TOTAL AMOUNT IS PAID ?
NO
YES
S5
ISSUE CUSTOMER COPY WITH SLIP No. OF INCOMPLETE TRANSACTION
S6
SUM UP SALES
RETURN

FIG. 8A

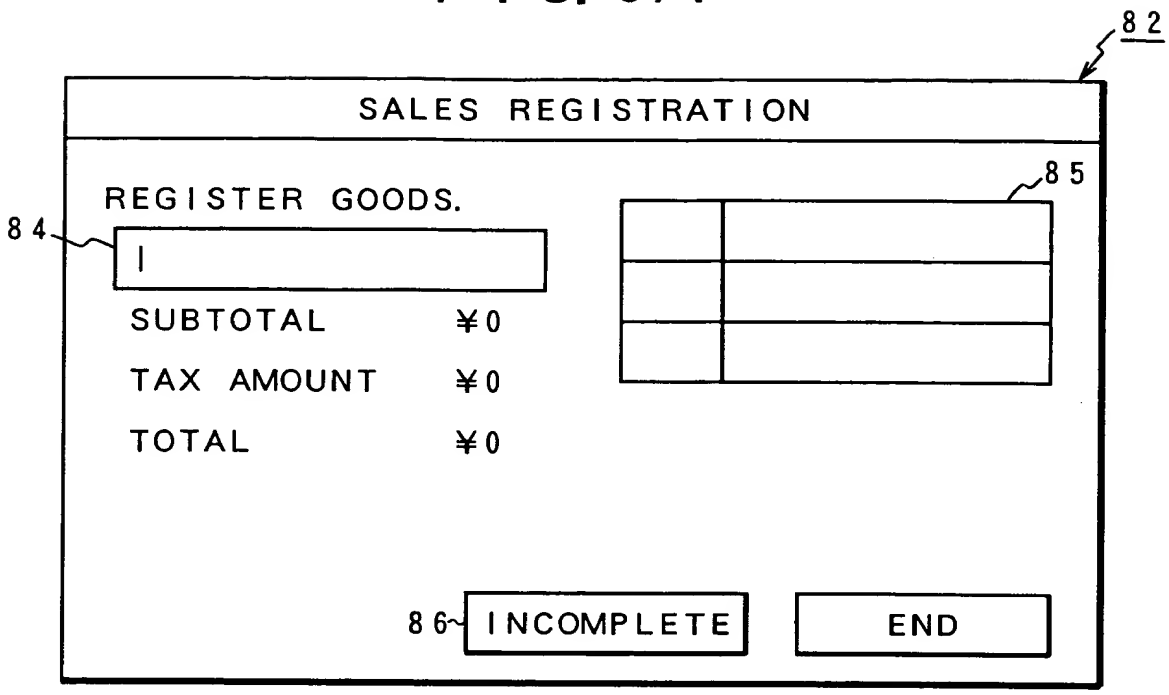

82
SALES REGISTRATION
85
REGISTER GOODS.
84
SUBTOTAL ¥0
TAX AMOUNT ¥0
TOTAL ¥0
86
INCOMPLETE
END

FIG. 8B

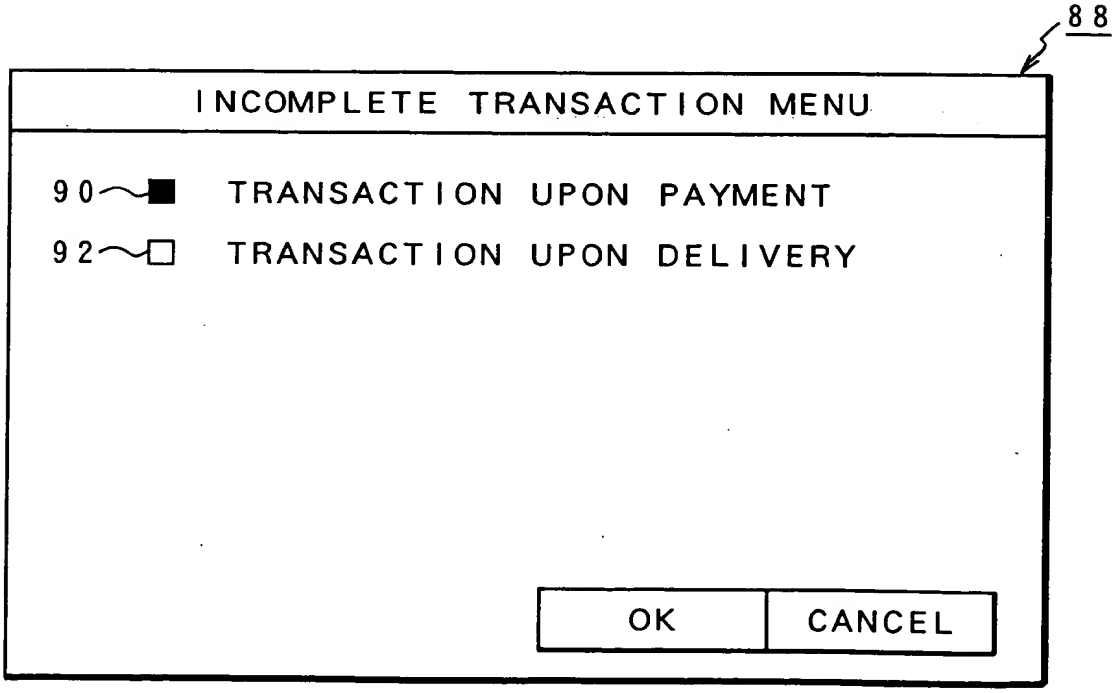

88
INCOMPLETE TRANSACTION MENU
90
TRANSACTION UPON PAYMENT
92
TRANSACTION UPON DELIVERY
OK
CANCEL

FIG. 8C

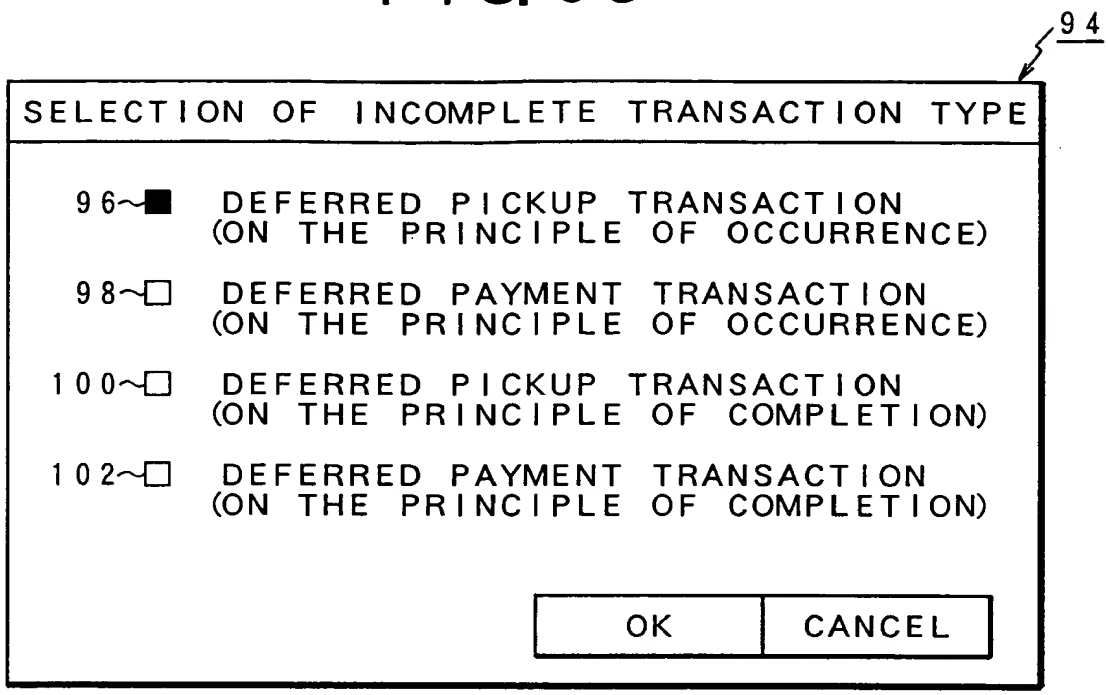

94
SELECTION OF INCOMPLETE TRANSACTION TYPE
96
DEFERRED PICKUP TRANSACTION (ON THE PRINCIPLE OF OCCURRENCE)
98
DEFERRED PAYMENT TRANSACTION (ON THE PRINCIPLE OF OCCURRENCE)
100
DEFERRED PICKUP TRANSACTION (ON THE PRINCIPLE OF COMPLETION)
102
DEFERRED PAYMENT TRANSACTION (ON THE PRINCIPLE OF COMPLETION)
OK
CANCEL

FIG. 8D

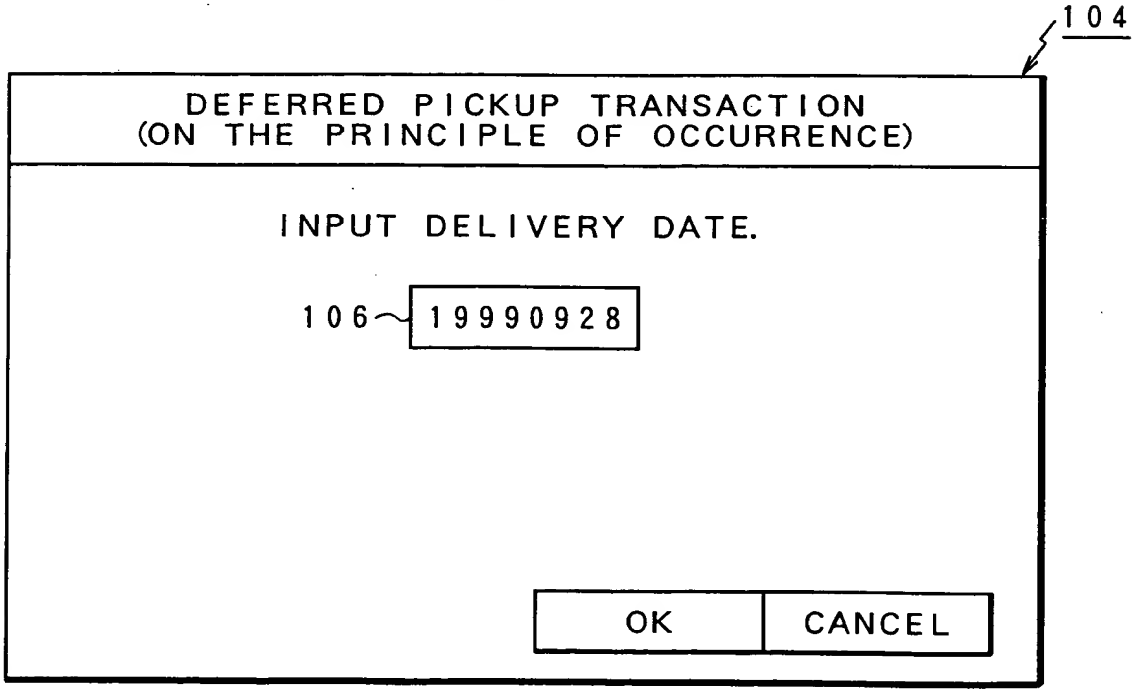

104
DEFERRED PICKUP TRANSACTION (ON THE PRINCIPLE OF OCCURRENCE)
INPUT DELIVERY DATE.
106
19990928
OK
CANCEL

FIG. 9

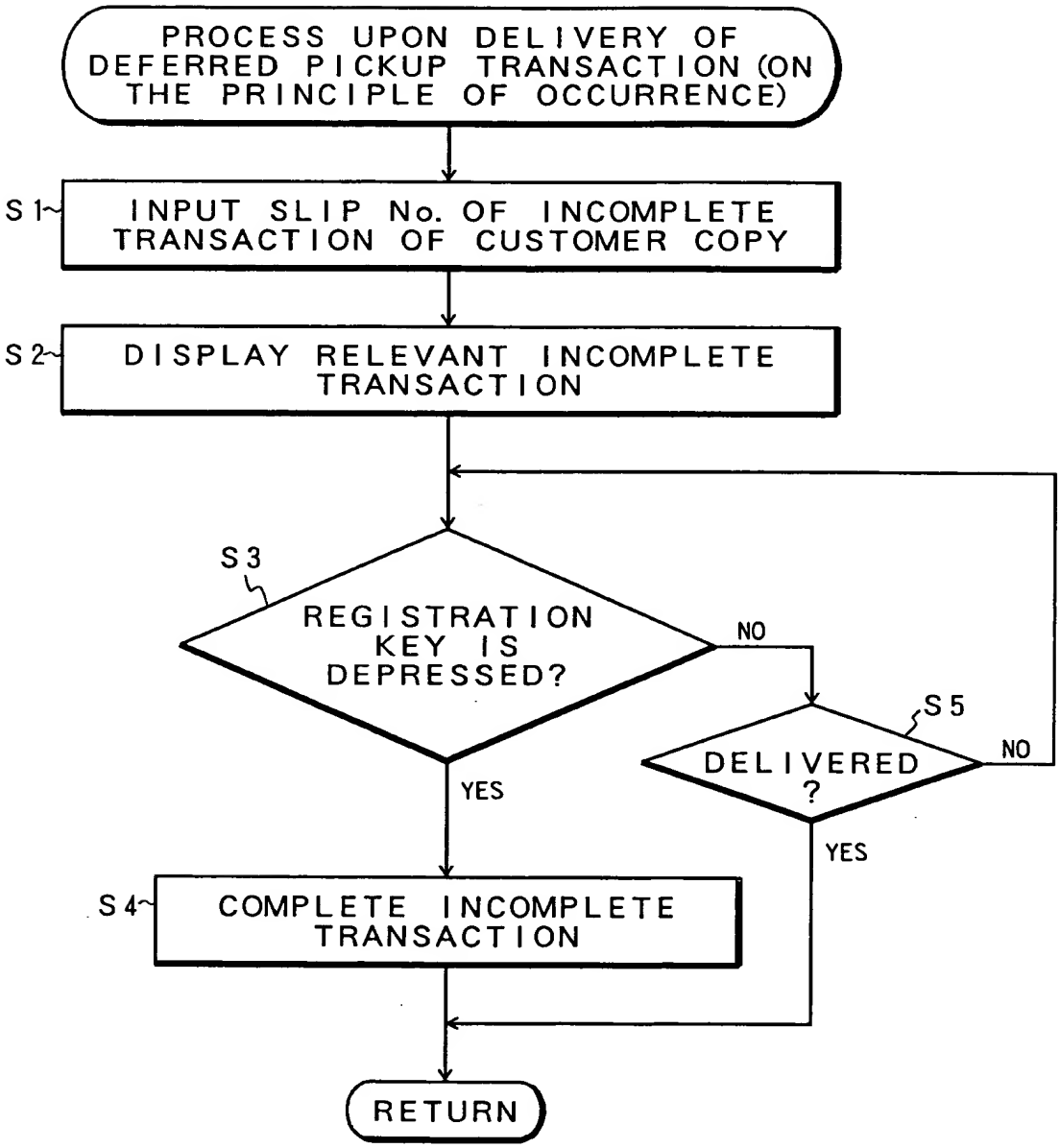

PROCESS UPON DELIVERY OF DEFERRED PICKUP TRANSACTION (ON THE PRINCIPLE OF OCCURRENCE)
S1
INPUT SLIP No. OF INCOMPLETE TRANSACTION OF CUSTOMER COPY
S2
DISPLAY RELEVANT INCOMPLETE TRANSACTION
S3
REGISTRATION KEY IS DEPRESSED?
NO
YES
S5
DELIVERED ?
NO
YES
S4
COMPLETE INCOMPLETE TRANSACTION
RETURN

FIG. 10A

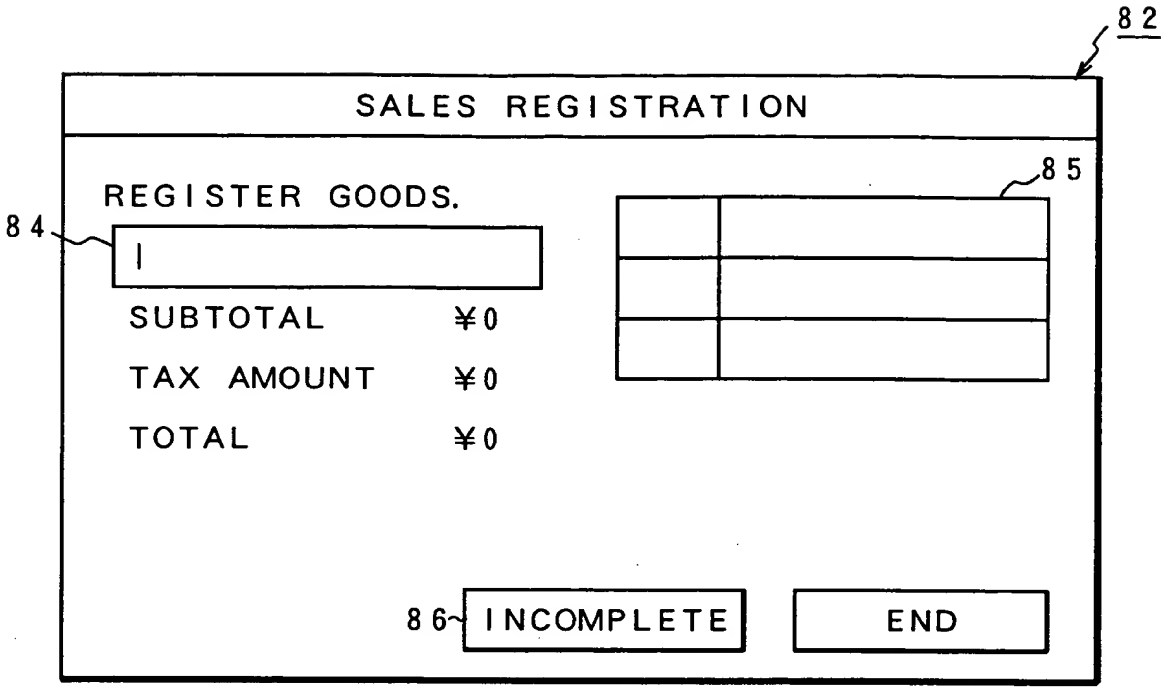


FIG. 10B

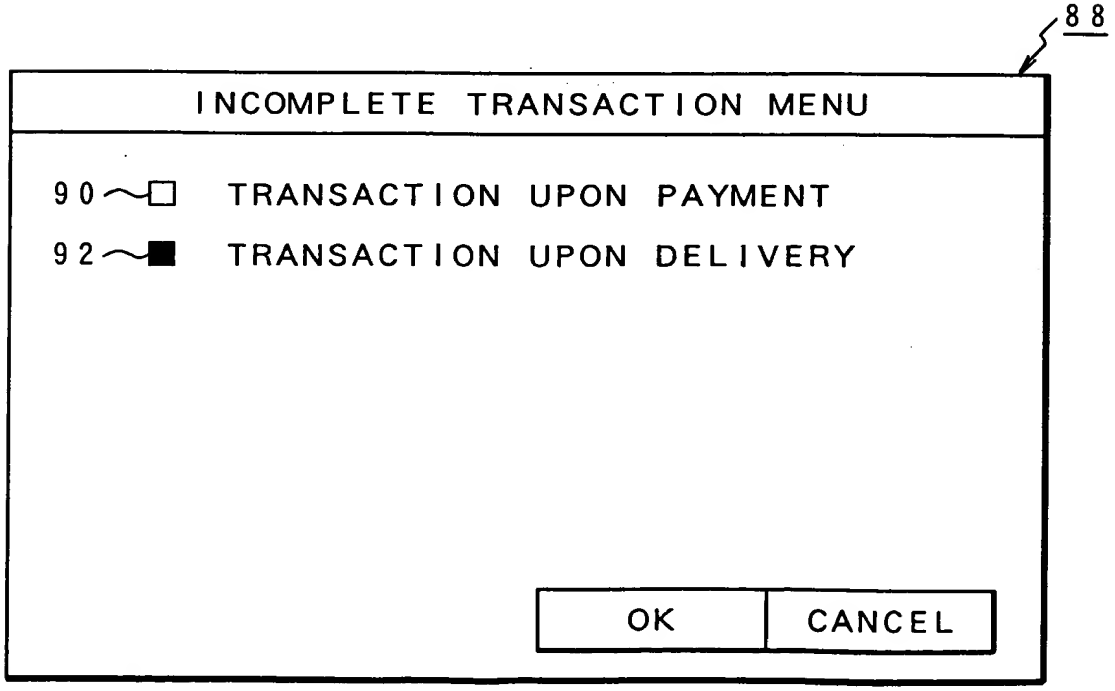


FIG. 10C

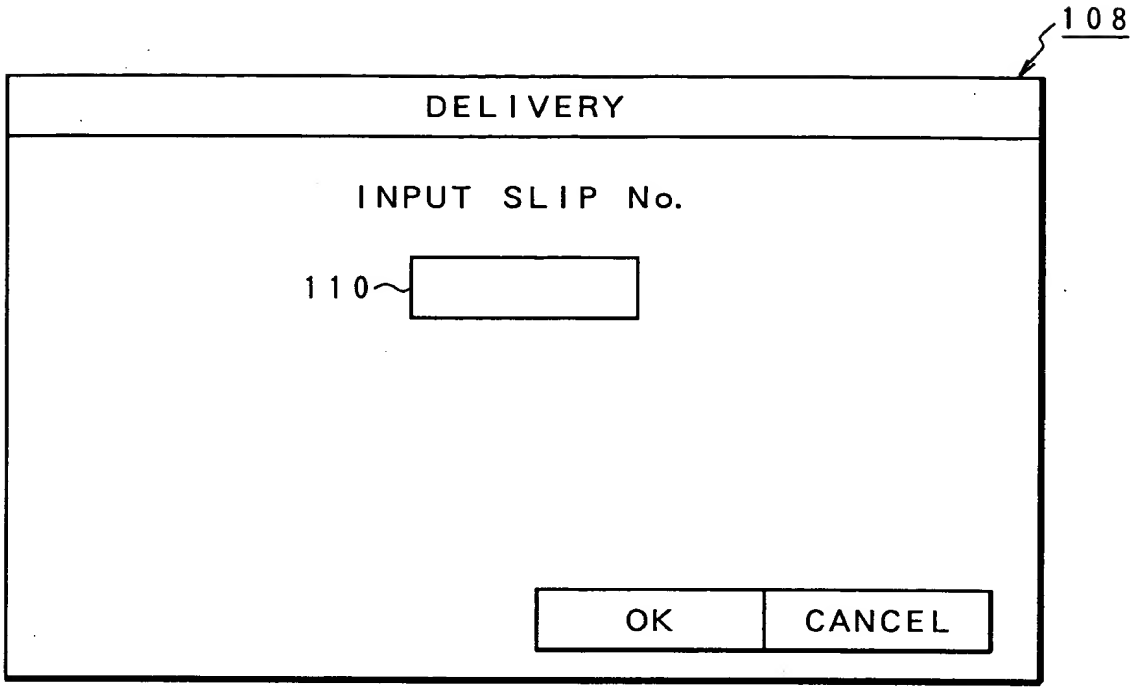


FIG. 10D

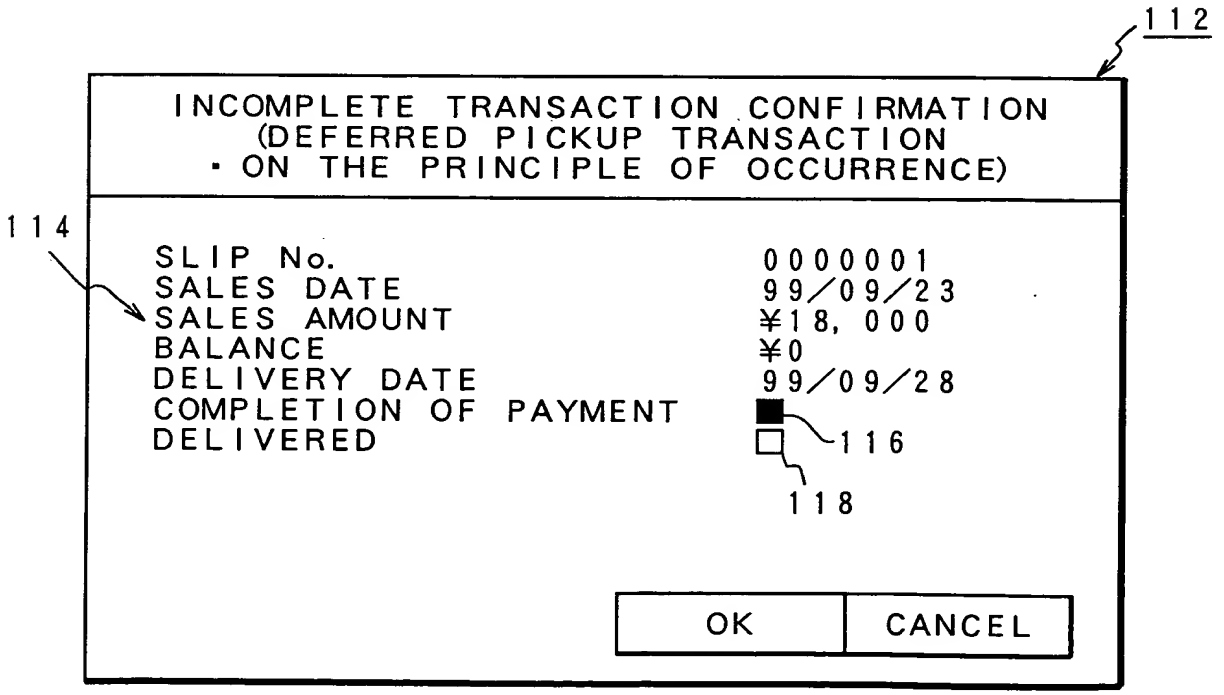


FIG. 10E

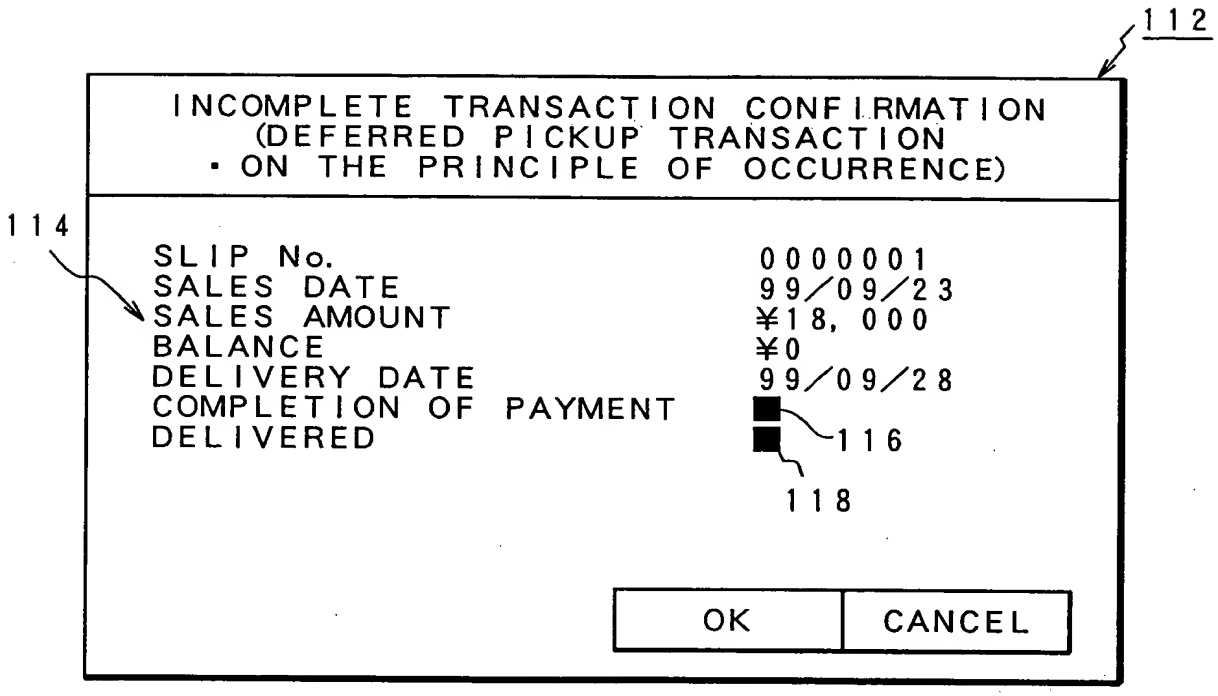

112
INCOMPLETE TRANSACTION CONFIRMATION
(DEFERRED PICKUP TRANSACTION
• ON THE PRINCIPLE OF OCCURRENCE)
114
SLIP No. 0000001
SALES DATE 99/09/23
SALES AMOUNT ¥18,000
BALANCE ¥0
DELIVERY DATE 99/09/28
COMPLETION OF PAYMENT
DELIVERED
116
118
OK
CANCEL

FIG. 11

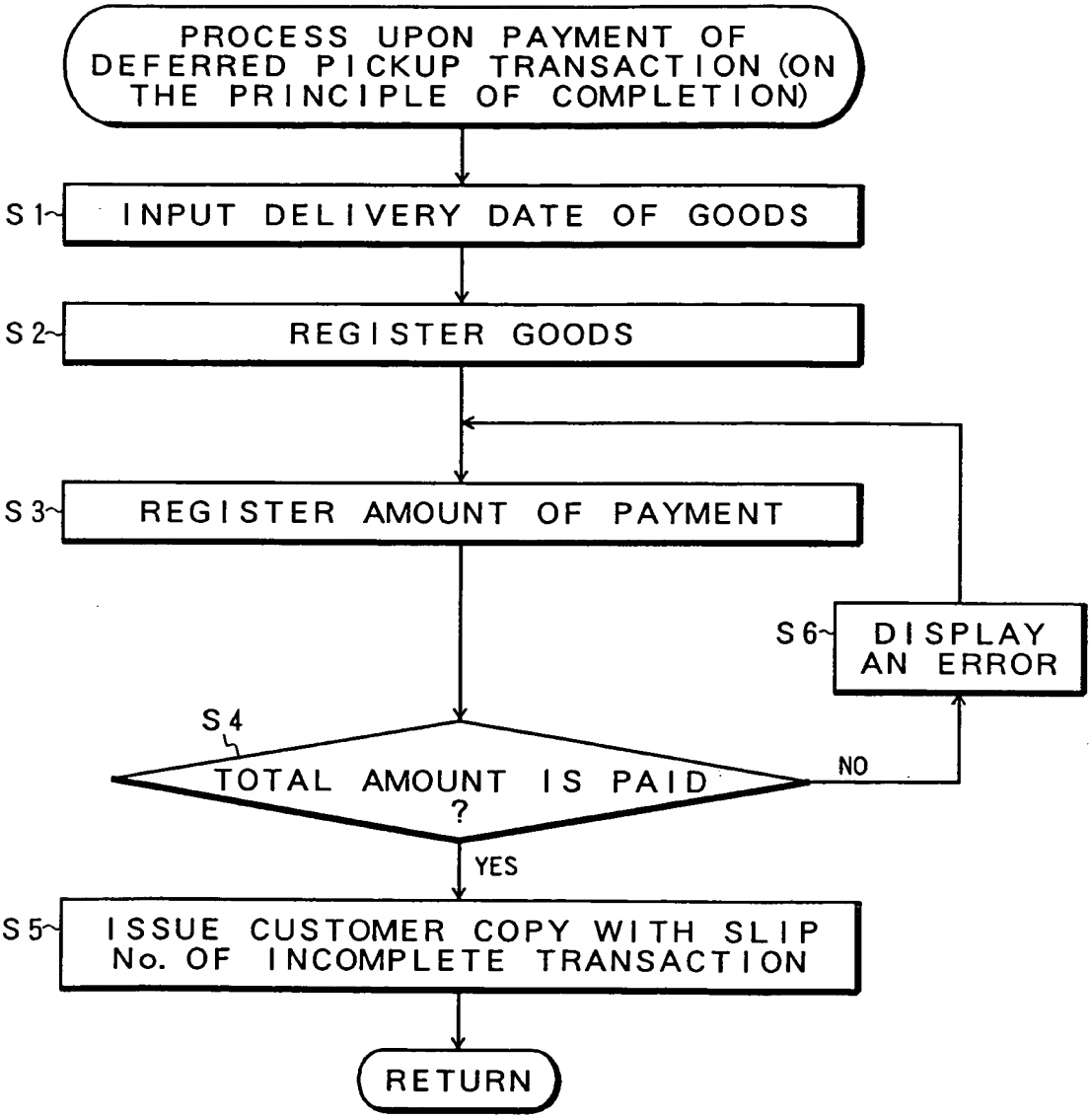

PROCESS UPON PAYMENT OF DEFERRED PICKUP TRANSACTION (ON THE PRINCIPLE OF COMPLETION)
S1
INPUT DELIVERY DATE OF GOODS
S2
REGISTER GOODS
S3
REGISTER AMOUNT OF PAYMENT
S4
TOTAL AMOUNT IS PAID ?
NO
S6
DISPLAY AN ERROR
YES
S5
ISSUE CUSTOMER COPY WITH SLIP No. OF INCOMPLETE TRANSACTION
RETURN

FIG. 12

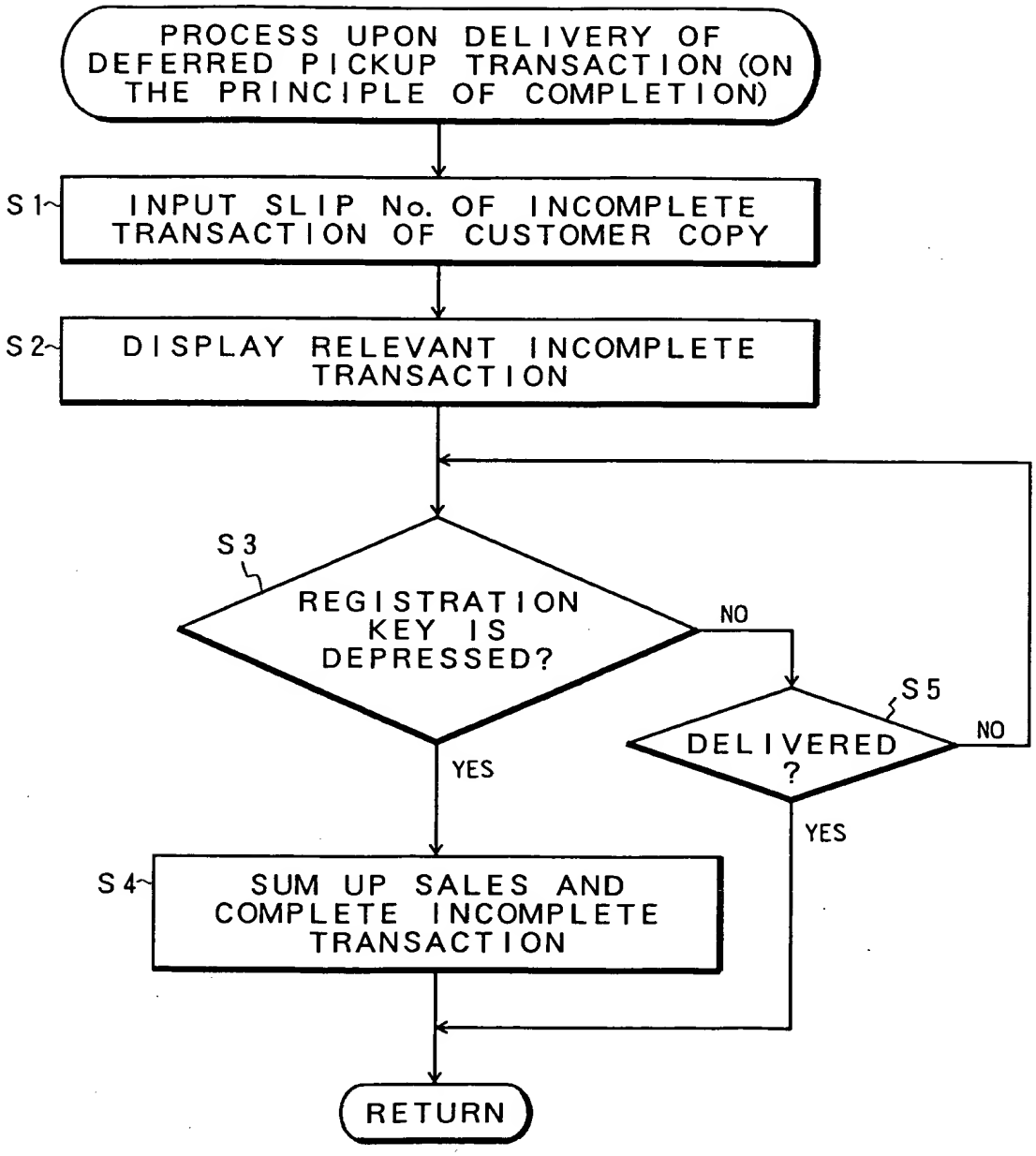

PROCESS UPON DELIVERY OF DEFERRED PICKUP TRANSACTION (ON THE PRINCIPLE OF COMPLETION)
S1
INPUT SLIP No. OF INCOMPLETE TRANSACTION OF CUSTOMER COPY
S2
DISPLAY RELEVANT INCOMPLETE TRANSACTION
S3
REGISTRATION KEY IS DEPRESSED?
NO
S5
DELIVERED ?
NO
YES
YES
S4
SUM UP SALES AND COMPLETE INCOMPLETE TRANSACTION
RETURN

FIG. 13

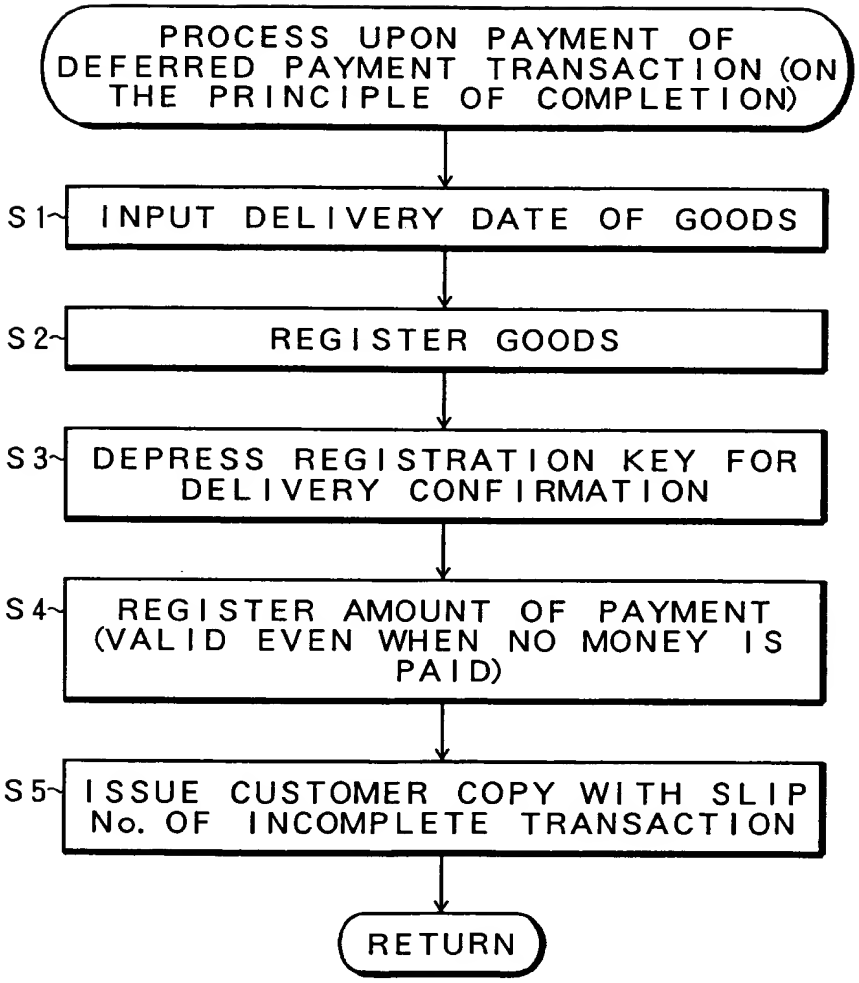

PROCESS UPON PAYMENT OF DEFERRED PAYMENT TRANSACTION (ON THE PRINCIPLE OF COMPLETION)
S1
INPUT DELIVERY DATE OF GOODS
S2
REGISTER GOODS
S3
DEPRESS REGISTRATION KEY FOR DELIVERY CONFIRMATION
S4
REGISTER AMOUNT OF PAYMENT (VALID EVEN WHEN NO MONEY IS PAID)
S5
ISSUE CUSTOMER COPY WITH SLIP No. OF INCOMPLETE TRANSACTION
RETURN

FIG. 14A

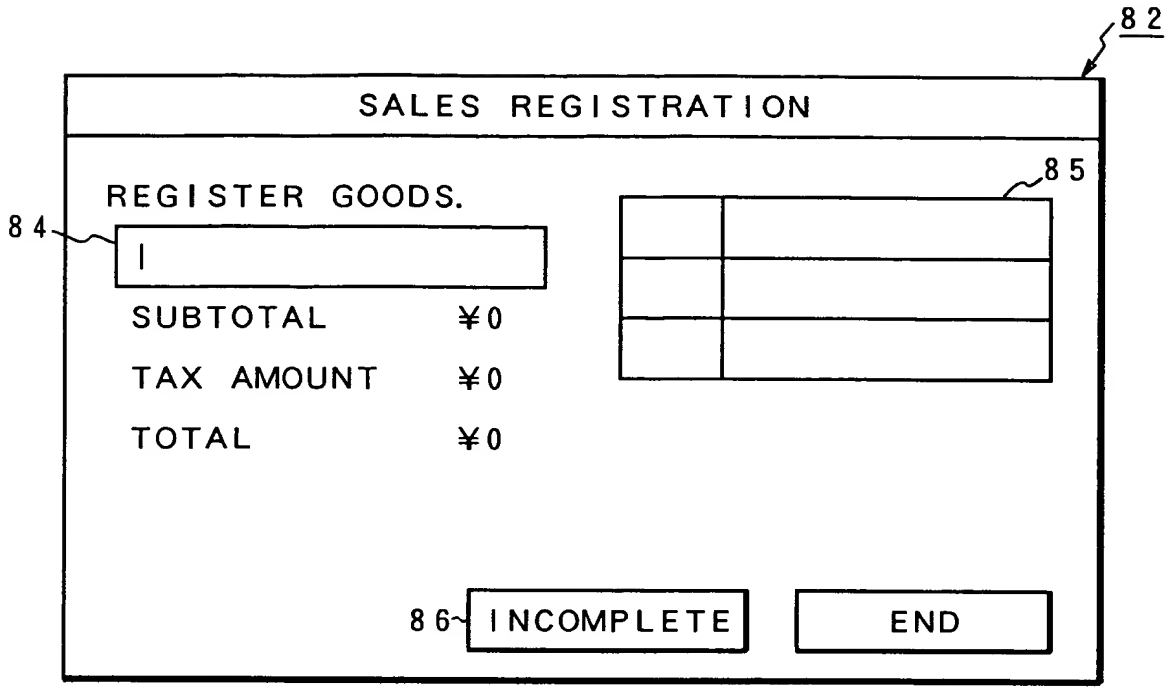


FIG. 14B

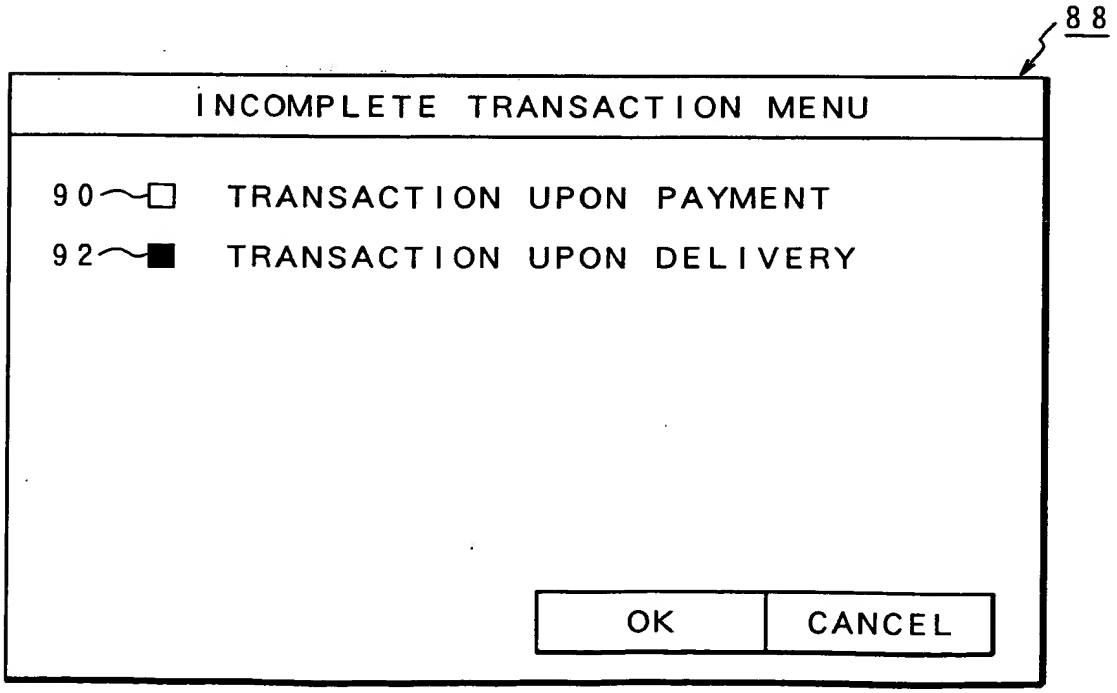


FIG. 14C

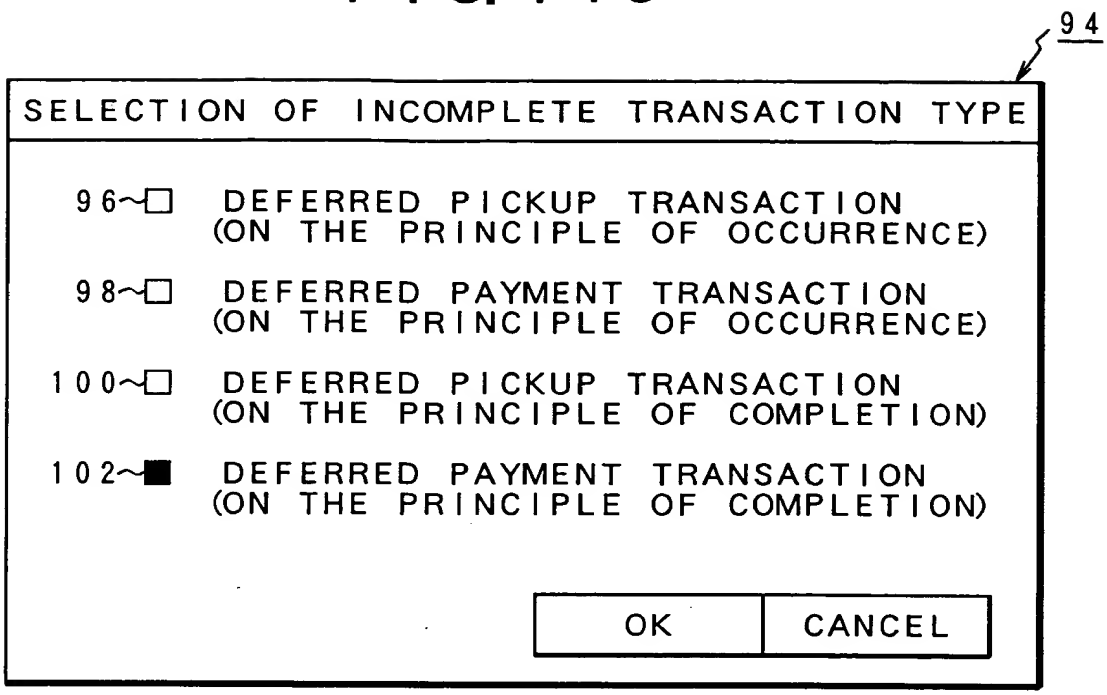


FIG. 14D

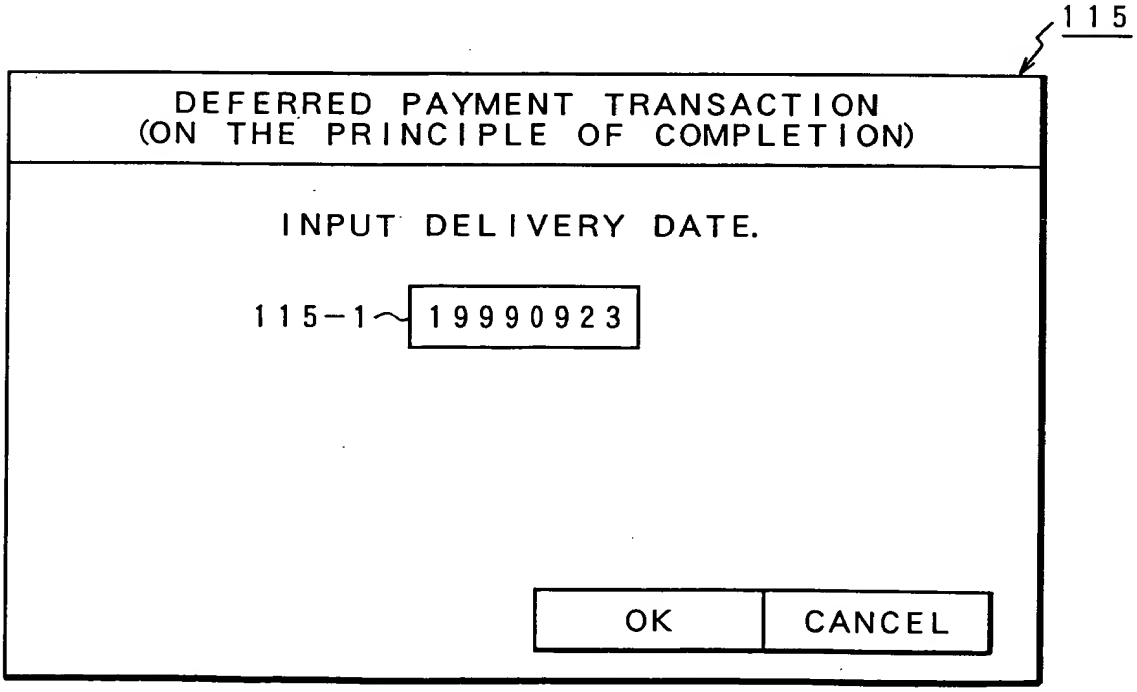


FIG. 14E

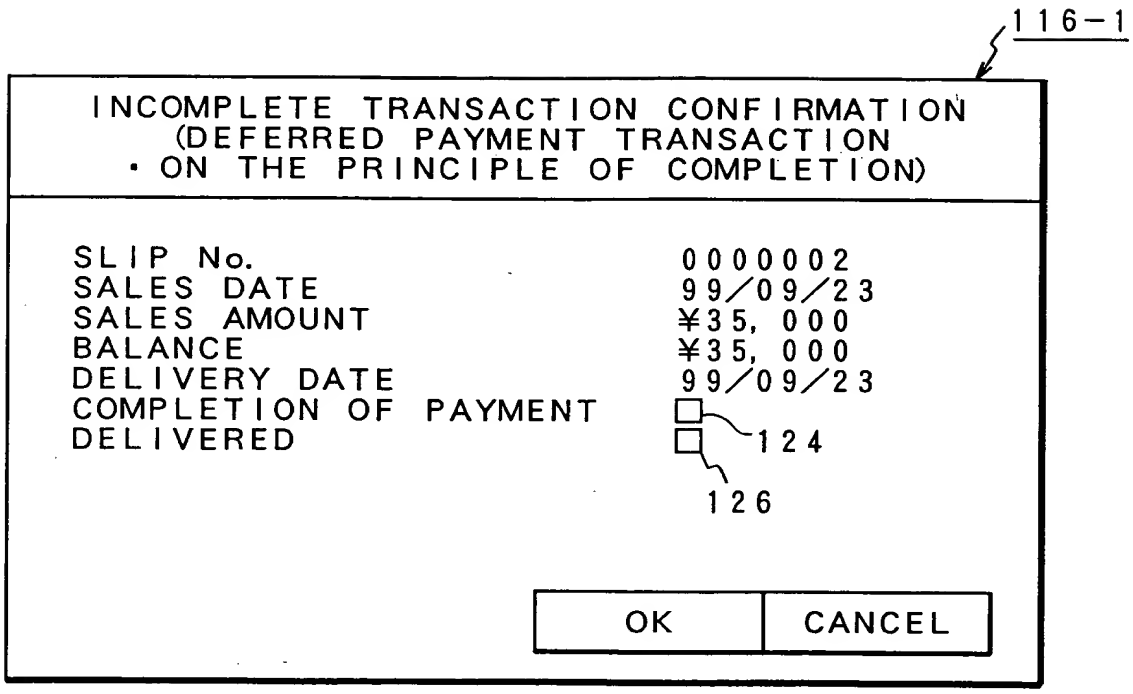

116-1
INCOMPLETE TRANSACTION CONFIRMATION
(DEFERRED PAYMENT TRANSACTION
• ON THE PRINCIPLE OF COMPLETION)
SLIP No.
0000002
SALES DATE
99/09/23
SALES AMOUNT
¥35,000
BALANCE
¥35,000
DELIVERY DATE
99/09/23
COMPLETION OF PAYMENT
DELIVERED
124
126
OK
CANCEL

FIG. 15

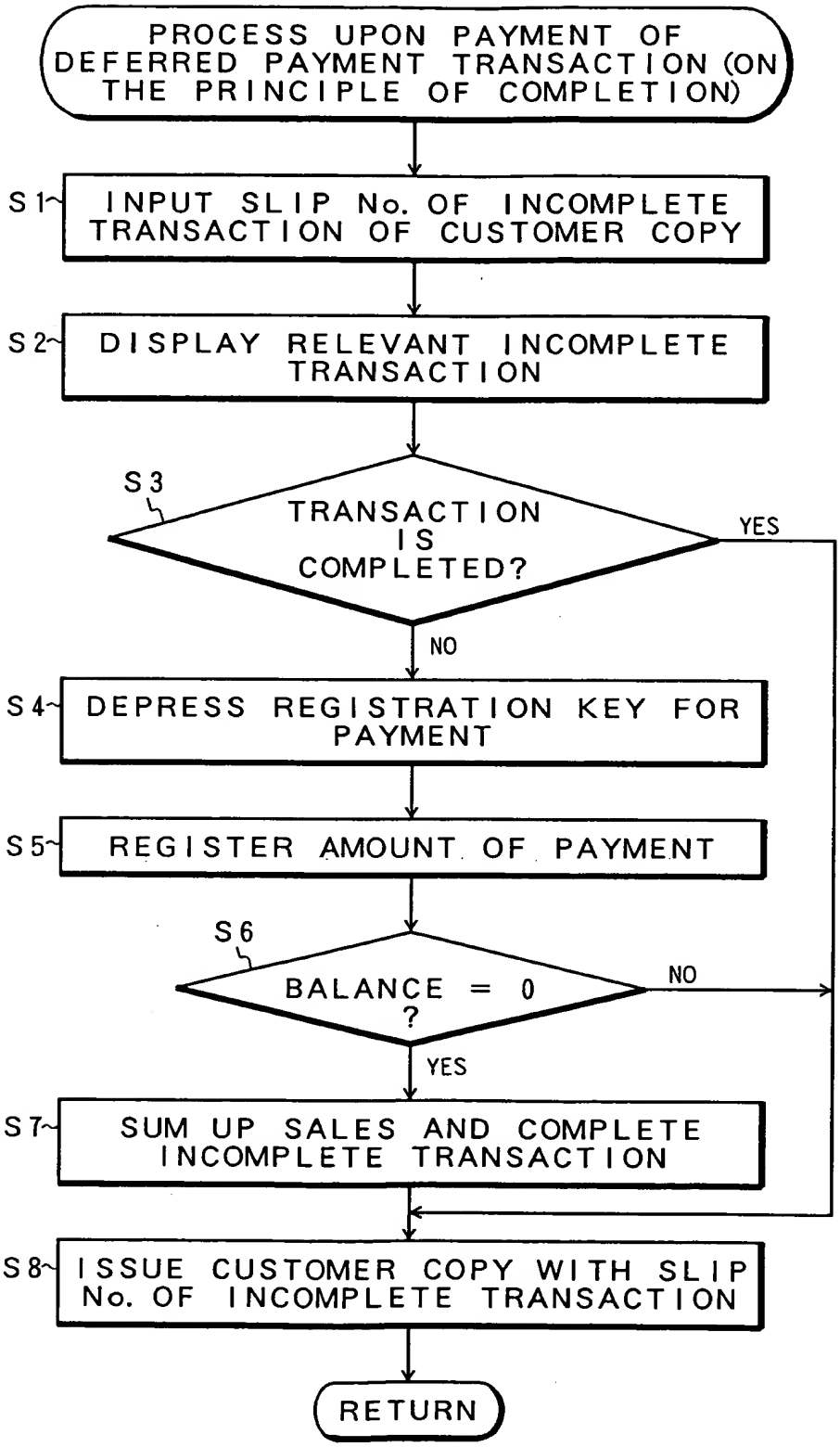

PROCESS UPON PAYMENT OF DEFERRED PAYMENT TRANSACTION (ON THE PRINCIPLE OF COMPLETION)
S1
INPUT SLIP No. OF INCOMPLETE TRANSACTION OF CUSTOMER COPY
S2
DISPLAY RELEVANT INCOMPLETE TRANSACTION
S3
TRANSACTION IS COMPLETED?
YES
NO
S4
DEPRESS REGISTRATION KEY FOR PAYMENT
S5
REGISTER AMOUNT OF PAYMENT
S6
BALANCE = 0 ?
NO
YES
S7
SUM UP SALES AND COMPLETE INCOMPLETE TRANSACTION
S8
ISSUE CUSTOMER COPY WITH SLIP No. OF INCOMPLETE TRANSACTION
RETURN

FIG. 16A

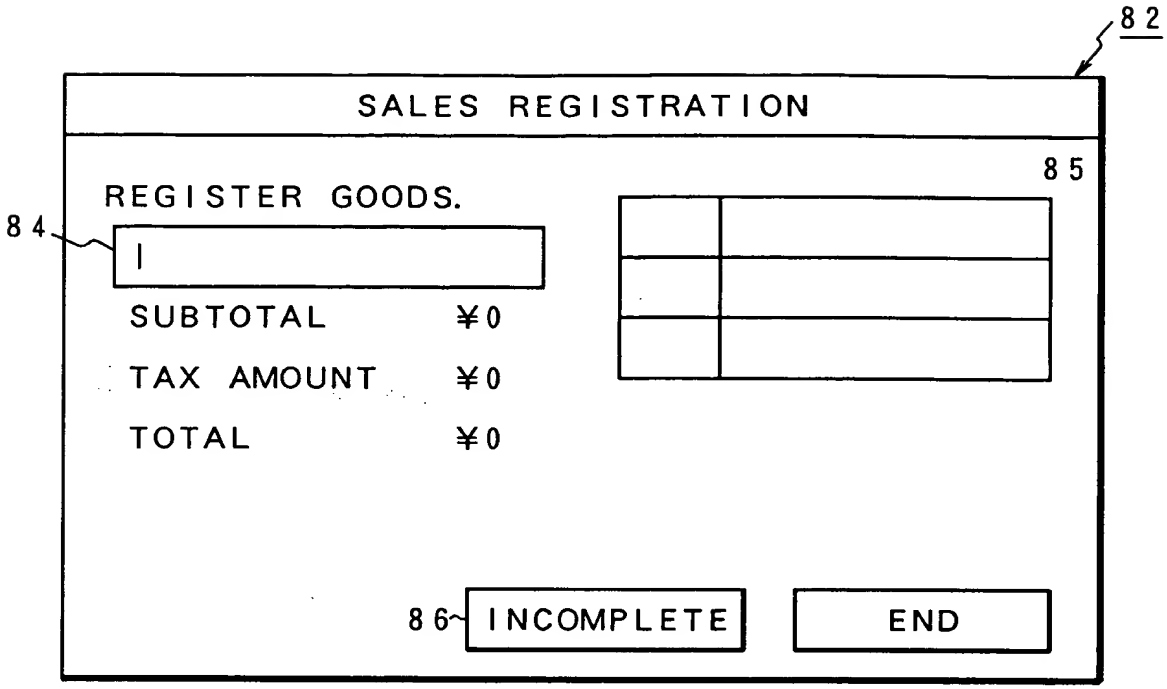


FIG. 16B

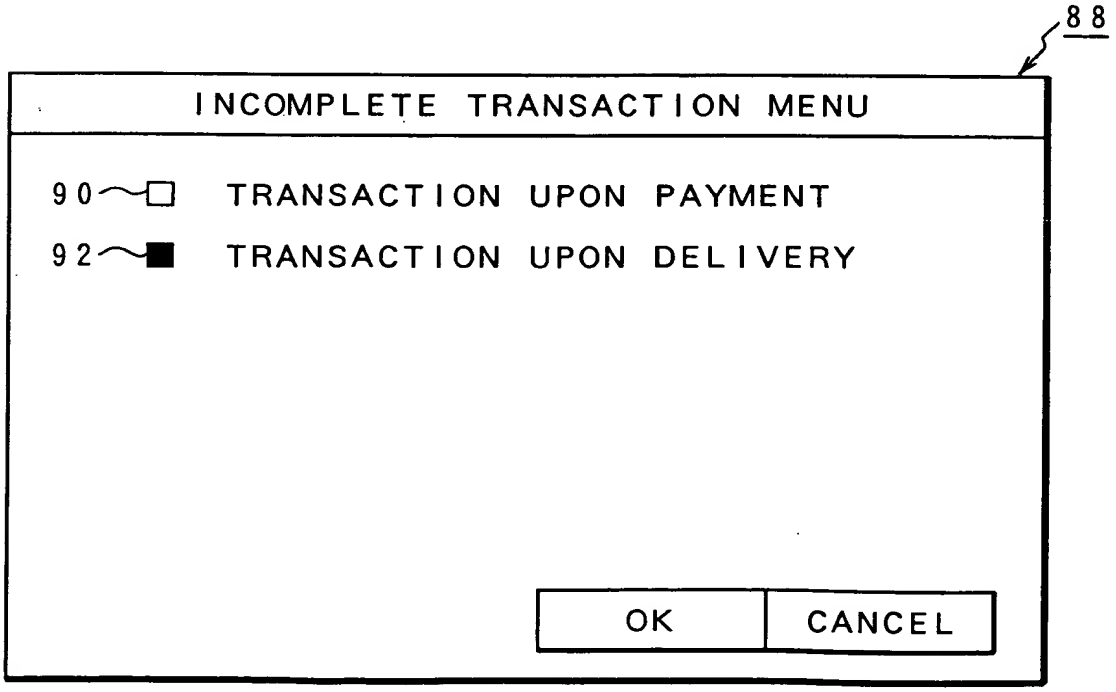


FIG. 16C

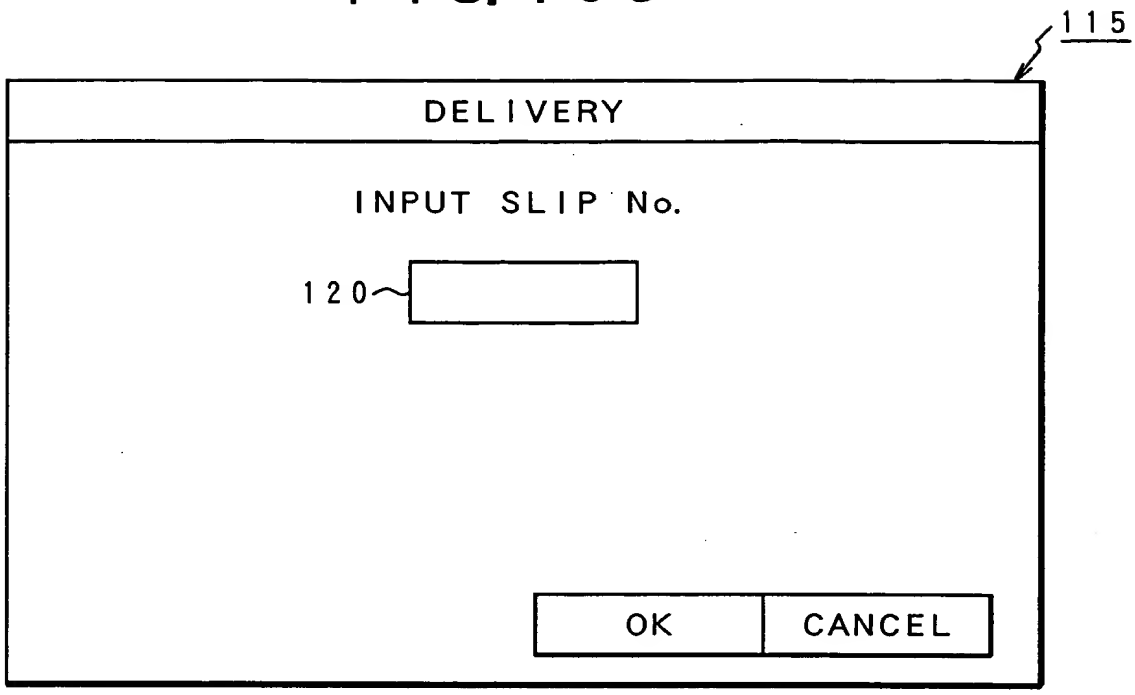


FIG. 16D

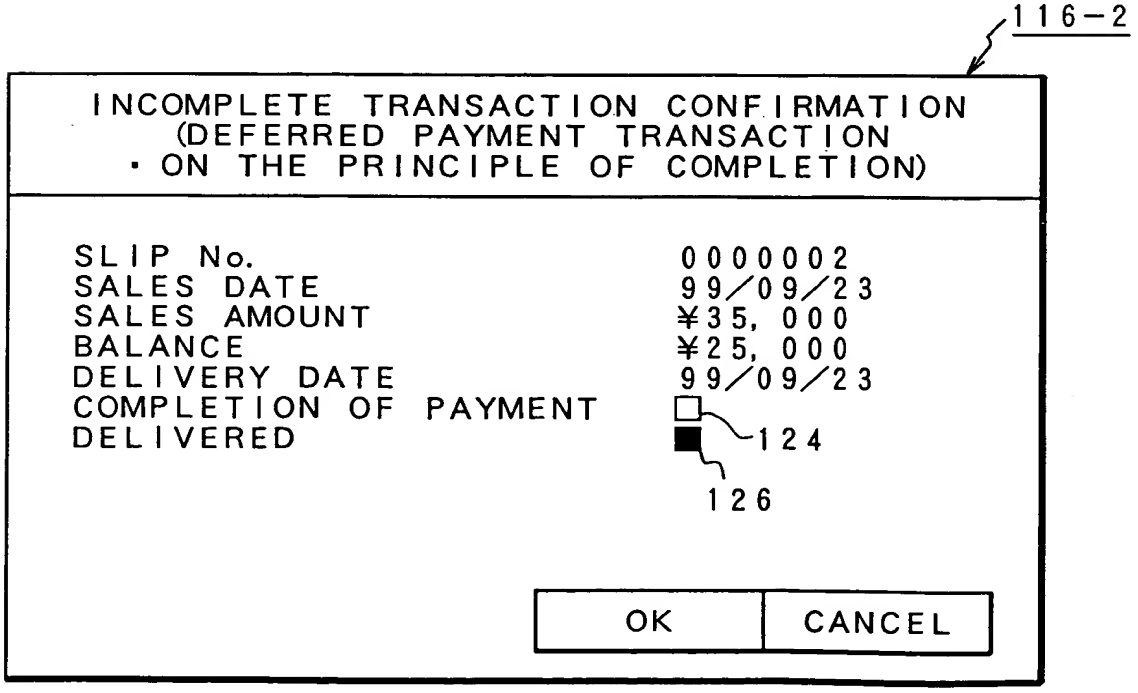


FIG. 16E

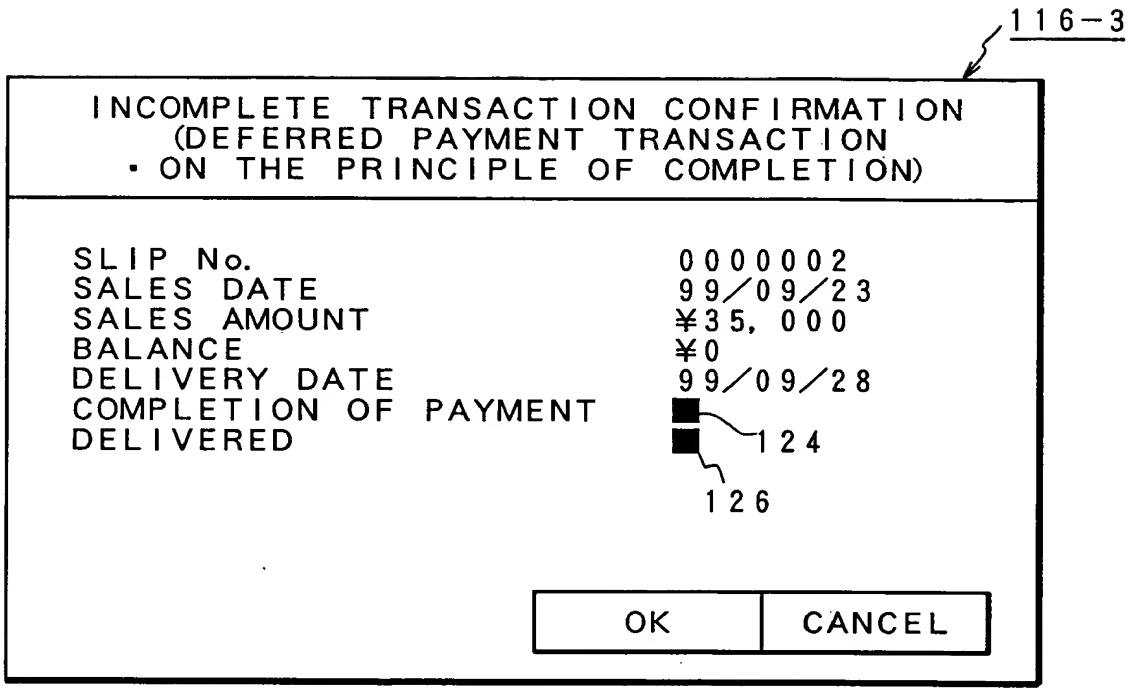

116-3
INCOMPLETE TRANSACTION CONFIRMATION
(DEFERRED PAYMENT TRANSACTION
• ON THE PRINCIPLE OF COMPLETION)
SLIP No.
0000002
SALES DATE
99/09/23
SALES AMOUNT
¥35,000
BALANCE
¥0
DELIVERY DATE
99/09/28
COMPLETION OF PAYMENT
DELIVERED
124
126
OK
CANCEL

FIG. 17

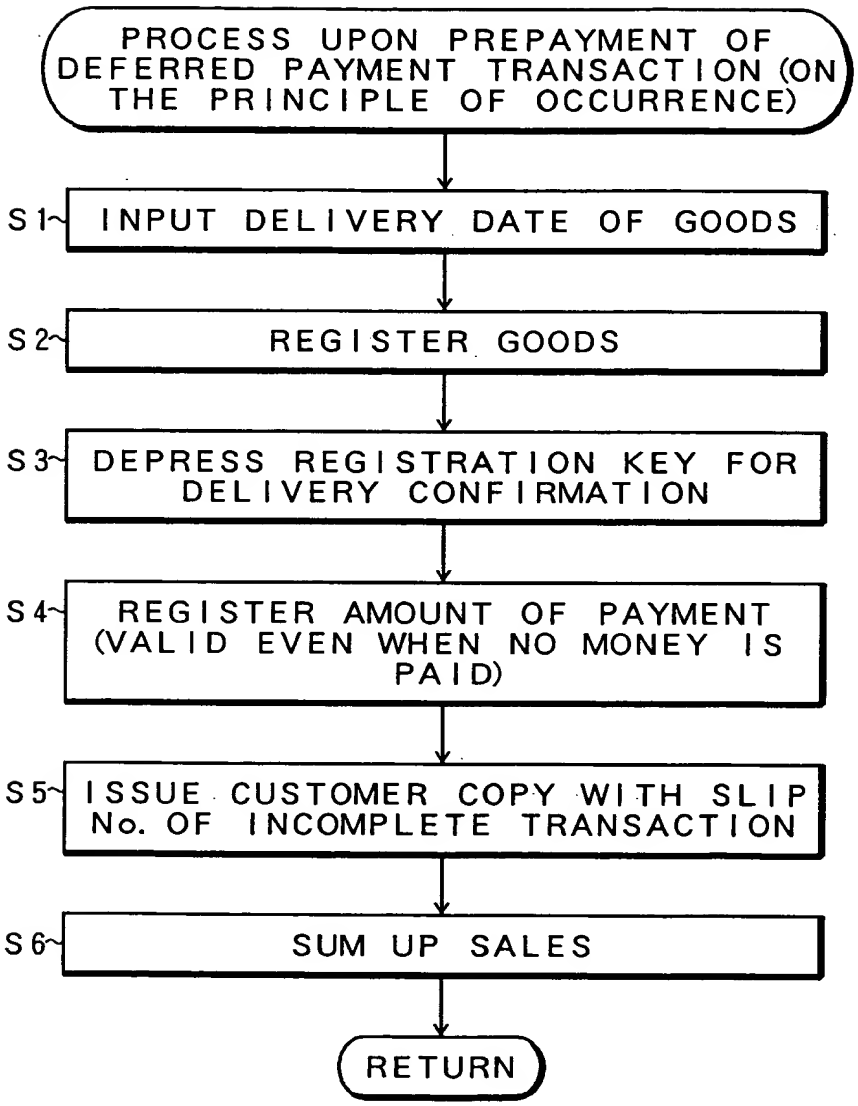

PROCESS UPON PREPAYMENT OF DEFERRED PAYMENT TRANSACTION (ON THE PRINCIPLE OF OCCURRENCE)
S1
INPUT DELIVERY DATE OF GOODS
S2
REGISTER GOODS
S3
DEPRESS REGISTRATION KEY FOR DELIVERY CONFIRMATION
S4
REGISTER AMOUNT OF PAYMENT (VALID EVEN WHEN NO MONEY IS PAID)
S5
ISSUE CUSTOMER COPY WITH SLIP No. OF INCOMPLETE TRANSACTION
S6
SUM UP SALES
RETURN

FIG. 18

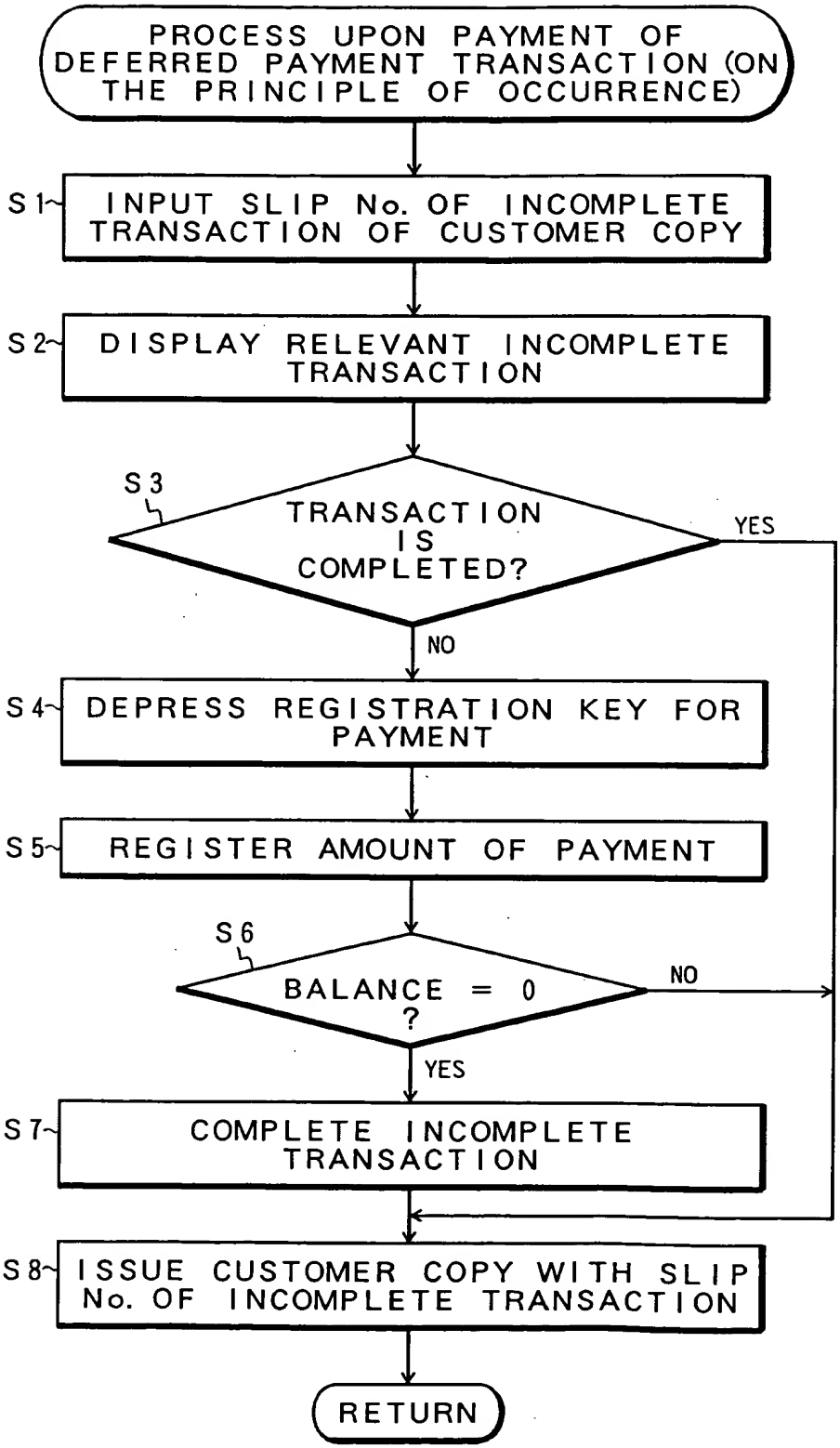

PROCESS UPON PAYMENT OF DEFERRED PAYMENT TRANSACTION (ON THE PRINCIPLE OF OCCURRENCE)
S1
INPUT SLIP No. OF INCOMPLETE TRANSACTION OF CUSTOMER COPY
S2
DISPLAY RELEVANT INCOMPLETE TRANSACTION
S3
TRANSACTION IS COMPLETED?
YES
NO
S4
DEPRESS REGISTRATION KEY FOR PAYMENT
S5
REGISTER AMOUNT OF PAYMENT
S6
BALANCE = 0 ?
NO
YES
S7
COMPLETE INCOMPLETE TRANSACTION
S8
ISSUE CUSTOMER COPY WITH SLIP No. OF INCOMPLETE TRANSACTION
RETURN

FIG.19A

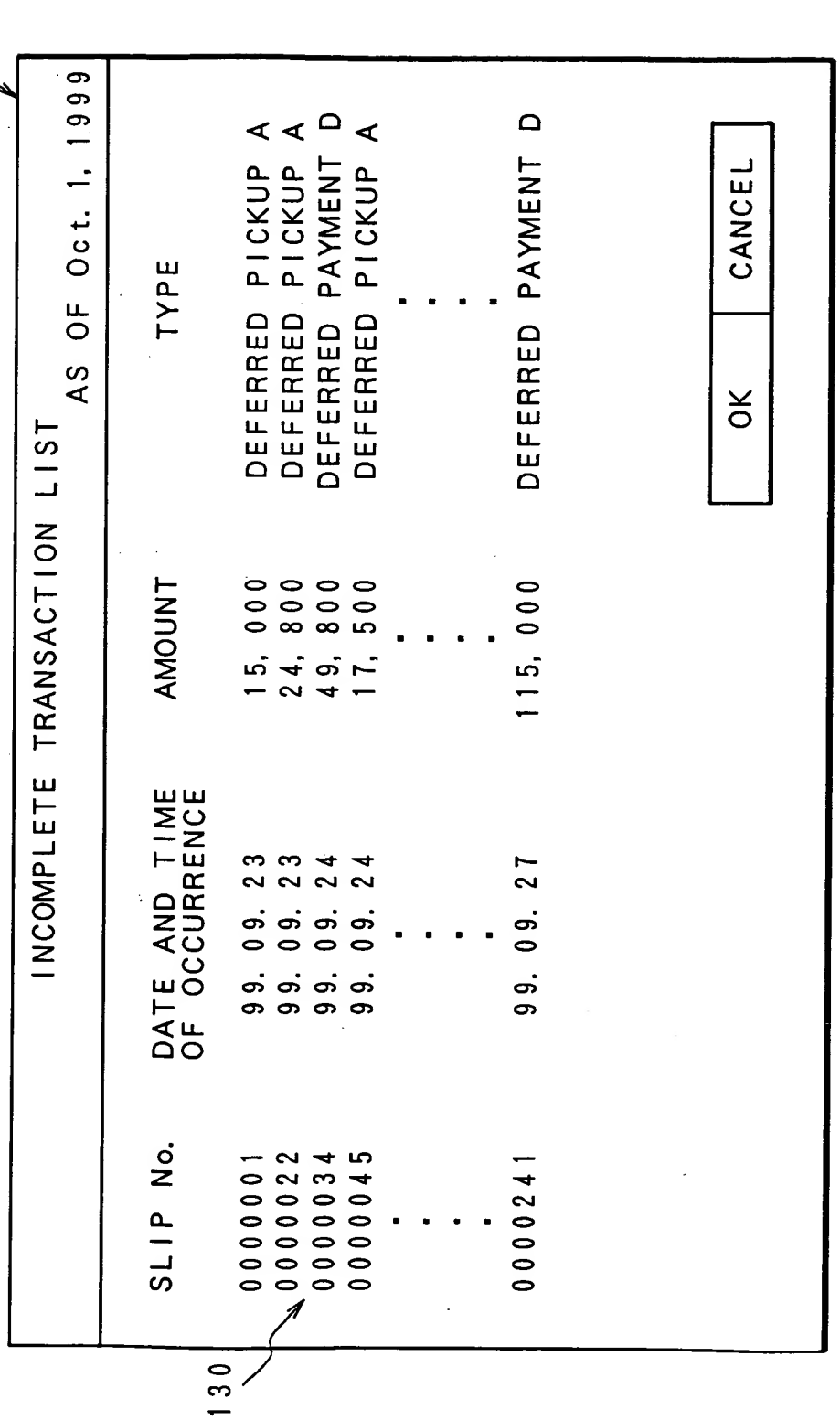

128
INCOMPLETE TRANSACTION LIST
AS OF Oct. 1, 1999
SLIP No.
DATE AND TIME OF OCCURRENCE
AMOUNT
TYPE
00000001 99. 09. 23 15, 000 DEFERRED PICKUP A
00000022 99. 09. 23 24, 800 DEFERRED PICKUP A
00000034 99. 09. 24 49, 800 DEFERRED PAYMENT D
00000045 99. 09. 24 17, 500 DEFERRED PICKUP A
0000241 99. 09. 27 115, 000 DEFERRED PAYMENT D
OK
CANCEL
130

FIG. 19B

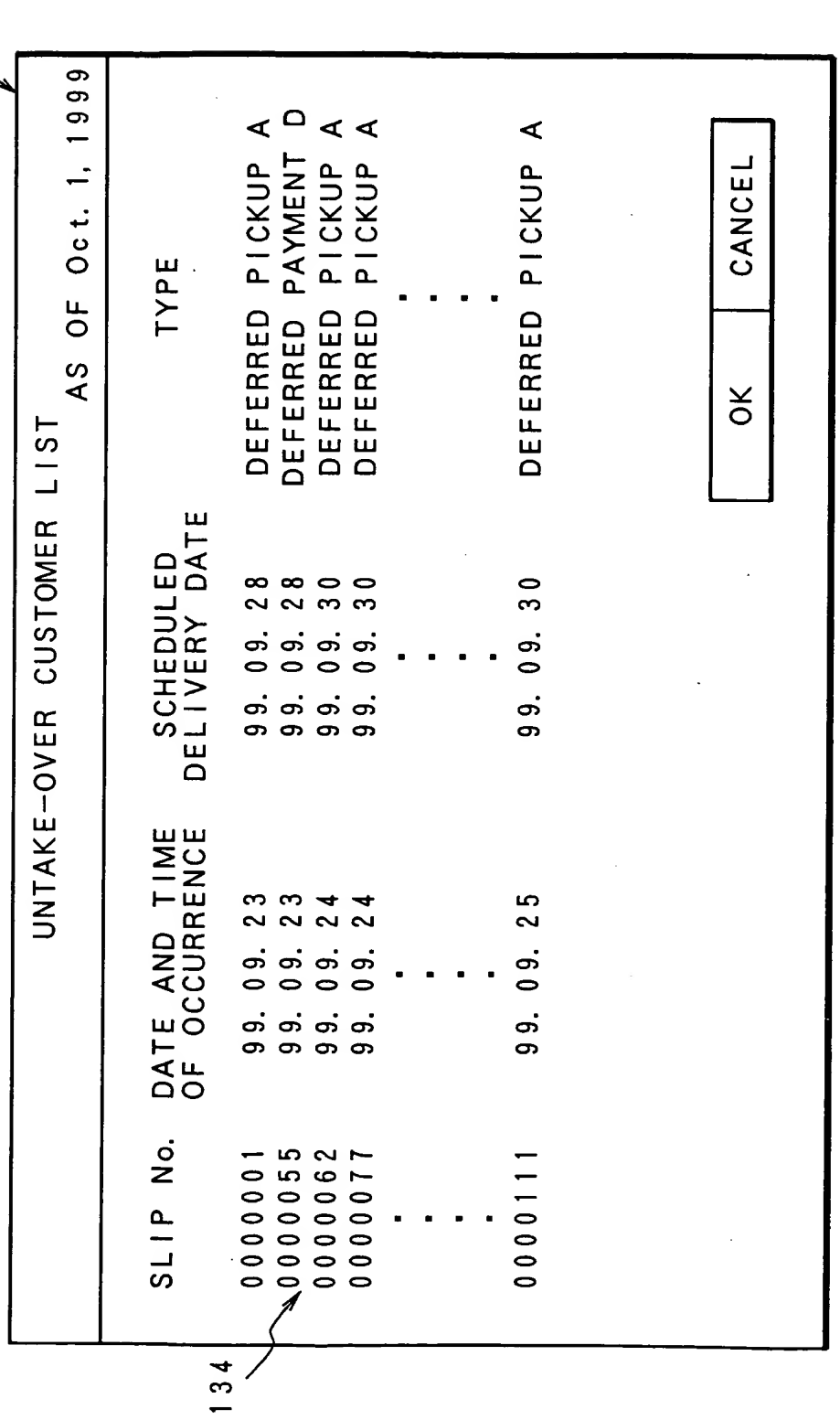
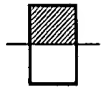

132
UNTAKE-OVER CUSTOMER LIST
AS OF Oct. 1, 1999
SLIP No.
DATE AND TIME OF OCCURRENCE
SCHEDULED DELIVERY DATE
TYPE
00000001 99. 09. 23 99. 09. 28 DEFERRED PICKUP A
00000055 99. 09. 23 99. 09. 28 DEFERRED PAYMENT D
00000062 99. 09. 24 99. 09. 30 DEFERRED PICKUP A
00000077 99. 09. 24 99. 09. 30 DEFERRED PICKUP A
00000111 99. 09. 25 99. 09. 30 DEFERRED PICKUP A
134
OK
CANCEL

FIG. 20A



50 INCOMPLETE TRANSACTION MANAGEMENT TABLE

STORE No.
INCOMPLETE TRANSACTION SERIAL No.
TYPE CODE
TRANSACTION SERIAL No. UPON OCCURRENCE
DATE AND TIME UPON OCCURRENCE
CUSTOMER No.
STATUS CODE
FINAL UPDATING DATE AND TIME
EMPLOYEE ID UPON OCCURRENCE
OPTION CODE
PAYMENT SCHEDULE CODE
REQUESTED AMOUNT
DOWN PAYMENT
SCHEDULED DELIVERY DATE
DELIVERY COMPLETION FLAG
SUM-UP POSSIBLE/IMPOSSIBLE FLAG
TOTALIZATION COMPLETION FLAG
:

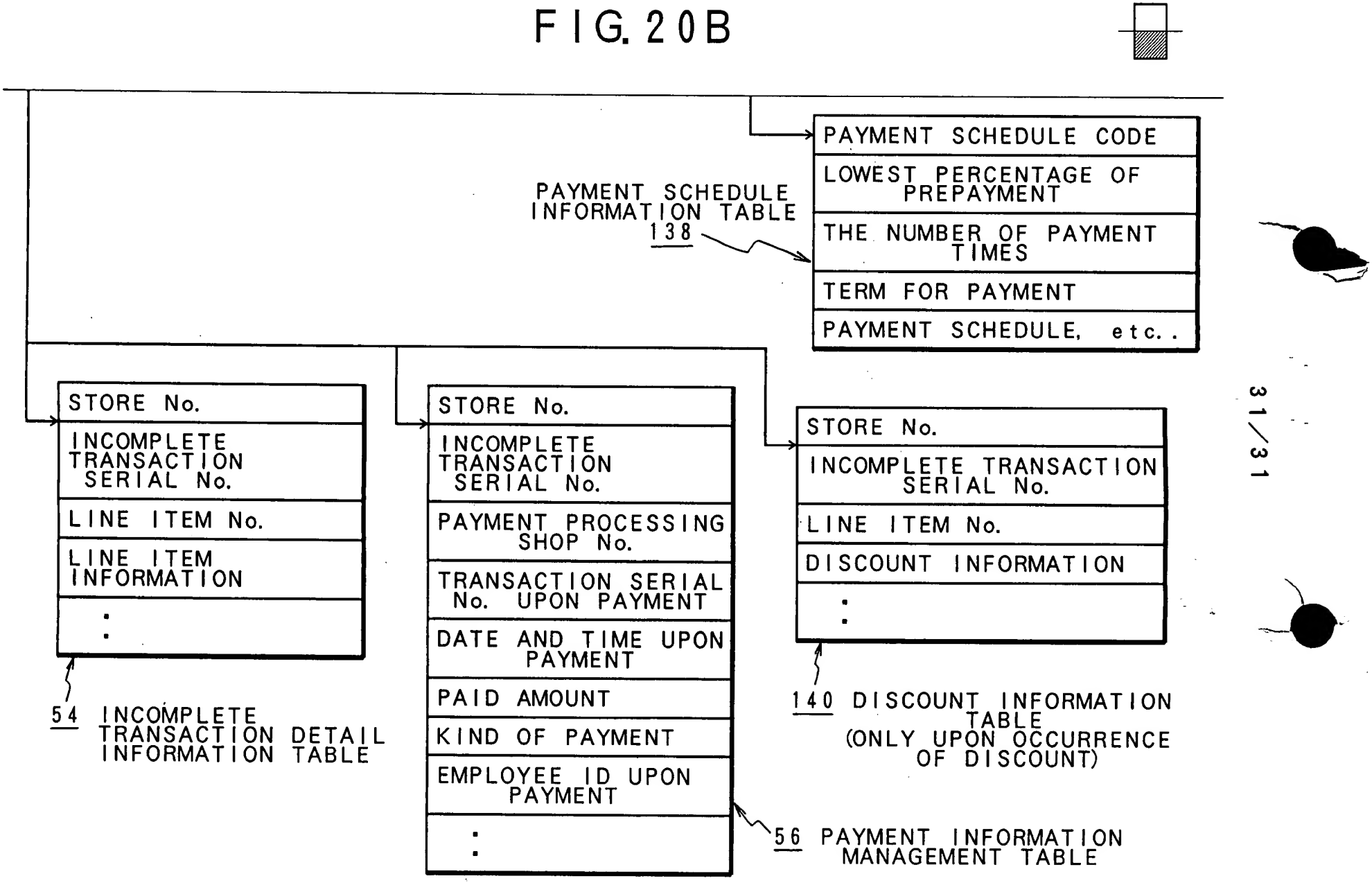
52 TYPE CODE TABLE

TYPE CODE
SUM-UP TIMING
PREPAYMENT NECESSARY /UNNECESSARY FLAG
PREDELIVERY POSSIBLE /IMPOSSIBLE FLAG
PAYING METHOD
DELIVERING METHOD
:

136 OPTION TABLE

OPTION CODE
INCOMPLETE TRANSACTION LONGEST PERIOD
METHOD AFTER THE ELAPSE OF THE LONGEST PERIOD
COMMISSION ON POSTPAYMENT
:

FIG. 20B


PAYMENT SCHEDULE CODE
LOWEST PERCENTAGE OF PREPAYMENT
THE NUMBER OF PAYMENT TIMES
TERM FOR PAYMENT
PAYMENT SCHEDULE, etc..
PAYMENT SCHEDULE INFORMATION TABLE
138
STORE No.
INCOMPLETE TRANSACTION SERIAL No.
LINE ITEM No.
LINE ITEM INFORMATION
54 INCOMPLETE TRANSACTION DETAIL INFORMATION TABLE
STORE No.
INCOMPLETE TRANSACTION SERIAL No.
PAYMENT PROCESSING SHOP No.
TRANSACTION SERIAL No. UPON PAYMENT
DATE AND TIME UPON PAYMENT
PAID AMOUNT
KIND OF PAYMENT
EMPLOYEE ID UPON PAYMENT
56 PAYMENT INFORMATION MANAGEMENT TABLE
STORE No.
INCOMPLETE TRANSACTION SERIAL No.
LINE ITEM No.
DISCOUNT INFORMATION
140 DISCOUNT INFORMATION TABLE (ONLY UPON OCCURRENCE OF DISCOUNT)